

Eng

Duke University Library

Priorities Plan Recognizes Small-Plane Manufacturers

Small-plane manufacturers will have a recognized place in defense plans under the new "controlled materials plan," Charles F. Horne, Administrator of Civil Aeronautics stated early this month. The new plan, which was effective on the first of the month and which replaces the DO system of allocating materials, continues CAA's role in the defense effort from the priorities standpoint.

With the establishment of the National Production Authority, existing Government agencies, such as CAA, were charged with certain parts of the job of assisting the NPA in carrying out its responsibilities. The CAA was given several broad functions, such as:

- (1) To claim and speak for the air carriers in relation to their maintenance problem.
- (2) To work with the Office of International Trade and the Economic Cooperation Administration in the establishment of a sound foreign civil aircraft requirements program, as well as to assist the Civil Aeronautics Board in the establishment of a program of new transport aircraft to be used by the U. S. flag airlines.
- (3) To claim for essential non-carrier new aircraft and maintenance requirements.
- (4) To claim and represent before the NPA, all activities relating to civil aviation operations and aeronautical facilities.

The last responsibility was broken down into four programs, namely, the Federal Airways Program; the Air Navigation Aids Research and Development Program; the Federal Aid Airport Program; and finally, looking after the needs of all other airports whether publicly or privately owned, and whether being assisted by Federal funds or not.

Defense Requirements Office.—To take care of these added functions, the CAA established the Office of Aviation Defense Requirements on January 28th of this year. The Office, headed by Mr. G. R. Gaillard, consists of five divisions—Aircraft, Electronics, Airports, Administrative, and Aviation Resources.

The aircraft program is divided into three phases—U. S. carrier requirements, non-carrier requirements, and foreign requirements.

In the establishment of carrier and non-carrier programs, CAA has developed with the Civil Aeronautics Board a definition of "carrier" which includes both scheduled and non-scheduled opera-

tions. The definition allows us to consider companies engaged in air carrier operation which:

- (1) Have a certificate of public convenience and necessity from the CAB.
- (2) Are operating under CAR Part 42 and use aircraft over 12,500 pounds gross weight. In other words, the large irregulars.

Working with the Munitions Board, CAA has been able to get all of the so-called scheduled air carriers as well as the large irregular carriers into a recognized program, which up until now has enjoyed practically the same priority assistance as the military.

(Continued on page 80)

1951 National Airport Plan Issued

The 1951 National Airport Plan, listing 4,945 locations at which airports should be constructed or improved to meet existing and anticipated demands for air service over the next 3 years, was announced recently by Charles F. Horne, Administrator of Civil Aeronautics.

This is the fifth in the series of such plans prepared by the CAA under the Federal Airport Act of 1946. The Act directed the Administrator to prepare and revise annually a 3-year forecast of airport construction or development projects considered necessary to provide a system of public airports adequate for the needs of civil aviation.

No funds, Federal or local, are assured by inclusion of a location in the Plan. However, on the basis of appropriations to be made by the Congress, the CAA will include in its coming fiscal year program those locations in the Plan which show the greatest need.

For its own guidance the CAA has estimated the cost of the work outlined in the Plan at \$662,000,000, which would require \$323,700,000 in Federal funds and \$338,300,000 in local sponsor funds.

"Farming Plane" Demonstrated at National Airport

The Ag-1, first airplane designed exclusively for agricultural use, was recently demonstrated at National Airport by the Civil Aeronautics Administration.

Before a group of Congressmen, government officials, aviation industry and agricultural representatives, C. W. Von Rosenberg, Chief of the CAA's Aircraft Division at Fort Worth, flew the plane in simulated spraying runs which revealed its unique performance and design characteristics.

Von Rosenberg brought the plane from College Station, Texas, where it was constructed under CAA contract at the Personal Aircraft Research Center of Texas A. & M. College. It will be demonstrated before aviation and farm groups throughout the country, as part of the accelerated service test program for the aircraft before it is certificated by CAA.

(Continued on page 81)

Of the total locations listed, 2,657 are for improvement of existing airports while 2,288 are for completely new fields.

In a departure from previous issues of the Plan, the 1951 version lists airports by service types rather than by numerical classes. It proposes 2,310 personal type airports, 1,524 new and 786 for improvement; 1,148 secondary airports, 350 new and 798 for improvement; 656 feeder airports, 75 new and 581 for improvement; 303 trunk airports, 12 new and 291 for improvement; 77 express airports, 3 new and 74 for improvement; 64 continental and larger, 5 new and 59 for improvement. The Plan also lists 304 seaplane bases and 83 heliports.

The Plan is broken down by States and each location listed shows present and proposed service type of airport. State summaries break the complete Plan down by airport service type, new airports, those recommended for improvement, seaplane bases, heliports, and estimated Federal and sponsor funds.

Copies of the 1951 National Airport Plan may be obtained from the U. S. Government Printing Office, Washington 25, D. C. at \$1.25 per copy.

Latest in Equipment and Procedures

Forms Basis of "Common System"

The Common System of Air Navigation and Traffic Control, the Administrator of Civil Aeronautics declared recently, will constitute the best navigation, communication and traffic control system that the world has ever seen.

The system is based on a combination of two major factors—the utilization of the most modern equipment and operational procedures, and the integration of all controlled air operations in the United States.

The Common System, as the name implies, is a system of air navigation and traffic control to be used in common by all who fly—military planes, airliners, executive planes, and private planes. It was developed, not by the CAA alone, but by a special committee of the Radio Technical Commission for Aeronautics, which included government agencies, military and civil, trade associations, radio manufacturers, airlines and pilot groups. The list of members, alternates, advisors and observers who blueprinted plans for the Common System is a veritable "Who's Who of Aviation".

The report of this Special Committee 31, made in 1948, called for modernization and improvement of our airways in two stages—an interim program to be completed by 1953, and an ultimate program with a target date for completion in the mid-1960's.

One of the most important parts of the interim program, which is nearing completion today, is the very high frequency omnidirectional radio range—the omnirange. Some 350 of these ranges are in operation to date, out of a planned total of about 450.

The omniranges offer tremendous advantages over the low-medium frequency four-course ranges which they will eventually replace. Omnidirectional flying is relatively free from static interference. Any desired course is available instead of the limited four courses offered by low-frequency ranges. Quadrant confusion is impossible with the omnirange, and flying with reference to a vertical needle is much less exhausting and more accurate than constant listening to the "dit-dah" of a low-frequency range.

Because of budgetary and other considerations, low-frequency and VHF ranges cannot be operated simultaneously for any extended period of time. Tentative plans have been made to dismantle the low-frequency ranges in progressive stages, beginning in the Spring of 1952 and ending in 1954.

Dismantling Program.—The timing of this dismantling program, and the selection of specific low-frequency ranges for early decommissioning, is an extremely difficult and complex problem. The impact of the defense program on procurement of airborne equipment is one factor, and the degree to which different groups of airspace users are equipped with omni receivers varies considerably. There are problems, too, in connection with immediate needs of the military services and the national defense.

The NAV Panel of the Air Coordinating Committee has been asked to help find the most satisfactory procedure and timing—procedure and timing which will result in a minimum of inconvenience and difficulty for the many kinds of airspace users, and yet not retain any L/MF ranges which are not essential to the National Economy and the National Defense.

VHF communications is another important part of the Common System. All CAA facilities have been fully equipped for some time with VHF receivers and transmitters. Traffic on the VHF frequencies is increasing rapidly as aircraft owners equip their planes with the necessary equipment, which pays a real dividend in reliable, static-free communication with resultant improved reliability of service.

The Instrument Landing System is part of the Common System outlined by Special Committee 31, as is surveillance radar and precision approach radar. CAA now has 94 ILS installations com-

sioned, out of a planned total of 176 for the continental U. S. and nine commissioned radar installations of each type, with 43 surveillance and 14 precision approach radars on order. Deliveries of these radars have been somewhat behind schedule, partly because of the pressure on manufacturers for urgently-needed military equipment.

Distance measuring equipment operates on radar principles to provide a pilot with constant information concerning his distance from the DME ground transmitter. This distance in miles is continuously displayed in the cockpit in easily readable form.

DME Equipment.—Ground-station DME transponders have been installed at omnirange sites between New York and Chicago. Others, as fast as they are delivered, will be installed at other omniranges throughout the country. The total program at this time is over 450. Eventually, CAA also expects to install DME on airports having ILS installations. During an ILS approach, DME will provide continuous and extremely accurate information concerning the distance of the plane from the airport—much better information than is available from the present 75 megacycle markers or compass locators.

Airborne DME equipment is not yet available for general purchase, but the hope is that it will be before long. The CAA is obtaining a few for testing and evaluation and a few are being loaned to the users of the airspace for familiarization purposes.

The airborne DME equipment is inherently somewhat more complex than an omnirange receiver, for example, and it may never become a bargain price piece of equipment. Projects are under way now, however, to simplify and reduce the cost of airborne DME to whatever degree is possible, consistent with reasonably good performance.

Along with development of the omnirange and DME has come the Course Line Computer, which will introduce additional flexibility to the omnirange-DME combination. The Course Line Computer, a light airborne electronic device, will make it unnecessary to fly directly to or from an omnirange. Instead, the pilot will be able to fly a straight course between any two selected points. The pilot sets certain information into the Computer. Then the Computer, using intelligence received from the DME and omnirange transmitters, continuously solves the specific navigational triangles involved. All the pilot has to do in order to stay on his preselected course is to keep his vertical needle centered just as he does in flying radially to or from an omnirange.

The Mechanical Interlock.—Another Common System device which is useful in air traffic control, but affects the pilot only indirectly, is what is called the Mechanical Interlock. This electro-mechanical device links together the air traffic control center and the airport traffic control tower. Information concerning the availability or occupancy of altitudes over jointly-controlled fixes is displayed by lights on indicator panels at both points. The interlock system simplifies coordination and reduces interphone circuit time.

An experimental radar control center is expected to be in operation at Washington National Airport by next fall. Radar appears most promising as one of the essential tools of traffic control, and the operation at the Washington Center should show

Vol. 12

July 20, 1951

No. 7



CAA JOURNAL

DEPARTMENT OF COMMERCE

Charles Sawyer, Secretary

Civil Aeronautics Administration

Charles F. Horne, Administrator

Ben Stern, Director

Office of Aviation Information

Issued on the 20th of each month by the Office of Aviation Information. Subscription 75 cents a year in the U. S. and Canada. Foreign countries, \$1.00. Sold by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. The printing of this publication has been approved by the Director of the Bureau of the Budget, June 29, 1949.

CAA and CAB Releases

Copies of CAA releases may be obtained from the CAA Office of Aviation Information. CAB releases are obtainable from the Public Information Section of the Board.

Administration

Elmer the Rubber Man Gets Bounced Around to Aid Aviation Safety—(CAA 51-31) (June 17).

CAA Demonstrates First Airplane Designed Exclusively for Farm Use—(CAA 51-32) (June 27).

CAA Announces the 1951 National Airport Plan—(CAA 51-33) (July 4).

Address by Charles F. Horne, Administrator of Civil Aeronautics, before the Local Service Airlines Forum, Purdue University, (June 22, 1951) "Local Service Airlines and the CAA."

Address by Charles F. Horne, Administrator of Civil Aeronautics, to Aviation Distributors and Manufacturers Association, Hot Springs, Va., (June 28, 1951) "Civil Aviation and the Controlled Materials Plan."

Board

CAB Extends Effective Date for Regulation Governing Large Irregular Carriers—(CAB 51-46) (June 28).

Suggestions for Landscaping Airports

"Airport Landscape Planting," a CAA publication intended as a guide for those interested in landscaping airports, briefly describes plant selection, methods of planting, and maintenance of planted areas. The 20-page booklet is one sale by the Superintendent of Documents, Government Printing Office, for 15 cents.

how it can best be used for this purpose, and what its presently usable potential in traffic control is. The Navy, the Air Force and elements of industry are cooperating with the CAA in this radar center project.

There are additional elements in the Common System—VHF/ADF, Secondary Radar and Transponders, ATC Signalling System, Data Transfer and Display Equipment, Airport Surface Detection Equipment and Traffic Delay Predictors. The ADF's are presently available, but the others are still under development.

The Common System is all the devices mentioned—all the component parts—working together for the benefit of all who fly.

CAB Chairman Traces Development Of Local Service Airline Operations

Policies of the Civil Aeronautics Board regarding local air carrier service operations and the development of local service were outlined by D. W. Nyrop, the Board's chairman, in an address before the Local Service Airline Forum at Purdue University last month.

The idea of developing a secondary short-haul air service pattern in the United States is at least 10 years old, Mr. Nyrop stated. It was in March 1943, he recalled, that the Board first instituted a formal investigation of the general problems involved in extending air transportation to air communities in the United States.

The proceeding was designated as "An Investigation of Local, Feeder and Pick-Up Air Service." It had as its stated objectives, Mr. Nyrop observed, the propriety of extending air transportation to communities where the usual type of air service would not appear economically warranted under existing standards. The Board was concerned also with the coordination of any 'short-haul' air transportation routes with the established 'long-haul' trunkline air routes of the nation.

Continuing his review, Mr. Nyrop stated that certain basic air transportation facts became apparent as a result of this investigation which the Board had begun on its own initiative. It was found, for example, the traffic potential initially at small cities would not be encouraging and that the cultivation of this potential at a reasonable cost to the Government and the traveling public would be possible only by taking advantage of every possible economy commensurate with safety. It was realized that local air carriers would be competing with the most highly developed rail and highway transportation systems in the world.

"In addition," the Chairman continued, "it was apparent as a result of the Board's investigation that the airplane had its greatest utility and profit value in the medium to long-distance transportation market where its outstanding characteristic of high-speed gives it great competitive advantage over all other forms of transportation. It was also apparent that in small-city short-haul markets the airplane is less effective as the number of intermediate stops are increased.

Experimental Operation.—"Consequently, in view of these considerations and many others, it was apparent to the Board in 1944 that the provision of a short-haul local service with aircraft would be an experimental operation because it constituted a problem on which the Board had little or no information of a factual nature."

Mr. Nyrop then observed that "the Board decided that applicants receiving certificates of public convenience and necessity for local air service would be limited to an experimental period of 3 years, which at that time the Board considered sufficient to judge the potentials of such services."

"The Board indicated its willingness to try out various operations which would include smaller aircraft, operation with a single pilot, elimination of luxury services, and the reduction of intermediate station personnel. It was obvious, even in 1944, that there were many new opportunities inherent in the development of local air service that would lend themselves to a saving in operating costs, but it was equally obvious that not all of them could be adopted in all cases."

Mr. Nyrop progressed in his outline with the statement that "by the end of the war the ceiling was unlimited in regard to enthusiasm for the development of local air carriers."

"Two of our largest aircraft manufacturers proceeded through the blueprint and prototype stage on specially designed, high speed so-called feeder type transport aircraft. Applications to obtain cer-

Court Order Enjoins Board's Enforcement Affecting Irregulars

The Civil Aeronautics Board, late last month, postponed the effective date of Amendment No. 1 to its regulation known as Part 291, governing Large Irregular Carriers. The Board's action was taken as a result of the recent decision by the United States District Court for the District of Columbia in an injunction proceeding brought against the Board by two of the Large Irregular Carriers. The court has entered a judgment granting a permanent injunction against enforcement by the Board of the amendment to the regulation.

In its formal action postponing the effective date (July 5, 1951) of the amendment, which would have imposed numerical and other operational limits upon the irregular operations of such carriers, the Board stated that it had instructed its General Counsel to request the Solicitor General of the United States for permission to take an appeal to the Circuit Court of Appeals. The Board, therefore, postponed the effective date of the amendment until a date to be fixed by the Board following the completion of any appeal to the Court of Appeals.

The postponement of the effective date of Amendment No. 1 of the regulation affects approximately 50 Large Irregular Carriers which are still operating under Part 291 of the Board's Regulations and whose applications for individual exemption orders, filed pursuant to Section 291.16 of that regulation, have not been finally disposed of. Since the action by the District Court and the postponement action of the Board relate only to Amendment No. 1 to Part 291, these 50 carriers must continue to abide by the requirements and limitations as set forth in Part 291 prior to the adoption of Amendment No. 1. The most important of such requirements is that each Large Irregular Carrier shall engage in air transportation only upon an irregular and infrequent basis.

The action of the District Court and the Board's postponement action have no effect upon the 14 former Large Irregular Carriers which have received individual exemption orders as a result of final Board action upon the applications filed by them pursuant to Section 291.16. The actions of the Court and the Board likewise have no effect upon the 34 former Large Irregular Carriers whose applications filed by them pursuant to Section 291.16 have been finally denied or dismissed by the Board.

"Air Fair" Reprinted

The CAA has ordered a new printing of the "Air Fair," a practical guide for staging a safe, constructive, but interesting air show. This booklet, published originally in May 1950, has proved so popular that a reprinting is necessary. It sells for 20 cents at the Government Printing Office, Washington, D.C.

Florida, had been certificated by the Board for a 3-year period in 1946. * * *

"In the meantime some of the local air carriers had made progress in strengthening their operations through mergers and dropping of uneconomic points on segments of their routes.

"On June 8, 1949, the Board announced its approval of the use of single-engine aircraft and small non-transport type multi-engine aircraft for passenger service. Subsequently, in January 1950, approximately 7 months later, the Board said its purpose in issuing its June single-engine aircraft policy was in part to provide service to certain certificated communities which might otherwise not be possible because of limited airport facilities, and to provide an experiment for the use of such equipment in this

(Continued on page 81)

Regulations

Amtd. 42-7.....Effective July 1, 1951

Amends Part 42 by adding a new § 42.15 (d) which sets forth requirements prohibiting the operation by an irregular carrier of any new large aircraft in passenger service unless it has been certificated in accordance with the transport category requirements of Part 4b.

Amtd. 3-6.....Effective June 4, 1951

Amends Part 3 of the Civil Air Regulations with respect to stalling requirements.

ER-163.....Effective May 28, 1951

Amendment No. 4 to Part 291 changes from June 5, 1951, to July 5, 1951, the effective date of Amendment No. 1 concerning operational limitations on exercise of temporary exemption by large irregular carriers.

Safety Orders

S-415 denies motion of Alfred F. Tucker to dismiss appeal of the Administrator of Civil Aeronautics; extends to June 7, 1951 time for Tucker's appeal brief (May 18).

S-416 vacates initial decision and order of the examiner and remands the proceeding to the examiner for the taking of additional evidence in the matter of the complaint of the Administrator of Civil Aeronautics against F. J. Langberg (May 28).

S-417 substitutes the name of C. F. Horne for the name of Donald W. Nyrop in all proceedings now pending before the Board in which Donald W. Nyrop, Administrator of Civil Aeronautics is Complainant (May 31).

S-418 modifies the Board's order No. S-346 by substituting May 8, 1951, in lieu of June 26, 1951, as the termination date for nonissuance of a pilot certificate to Warren A. Sherrer (June 4).

S-419 modifies, with stated provision, the examiner's order of April 18, 1951, so as to grant the petition of Gene Hall that he be issued a third class medical certificate if he is otherwise physically qualified (June 6).

Airline Orders

E-5201 extends from April 10, 1951, to July 8, 1951, the period of suspension of the reduced cargo rates proposed by The Flying Tiger Line (March 16).

E-525 grants Braniff Airways permission to intervene in the matter of the application of "Area" Aerovias Ecuatorianas C.A., for a foreign permit to transport persons, property and mail between Quito or Guayaquil, Ecuador, Panama (Tocumen) and Miami, Fla. (April 2).

E-5252 denies motion of Pan American that the record be reopened or stayed, and requests of Greater Miami Traffic Association and Midet Aviation Corporation in the Florida-Bahamas Service case (April 2).

E-5253 opinion and order in the *United Airlines, Inc.-Boston-New York Cargo* case, amend certificate, effective June 2, 1951, of United Air Lines for route No. 1, subject to stated conditions; otherwise denies (April 3).

E-5254 denies application of Braniff Airways for an exemption from the provisions of section 401 of the Act so as to inaugurate service to and from Santa Cruz, Bolivia, pending decision on its application to amend its certificate (April 4).

E-5255 denies application of Economy Airways for an exemption which would permit it to engage in certain air transportation as authorized by Part 291; terminates temporary exemption; denies requests of various air carriers (April 5).

E-5256 grants exemption from the provisions of section 291.18 of the Board's Economic Regulations, insofar as they would otherwise prevent the transfer of Letter of Registration No. 1959 from Kirk Kerkorian and Rose Pechulis d/b/a Los Angeles Air Service to Los Angeles Air Service, Inc., with stated provision (April 5).

E-5257 authorizes All American to suspend service at Athens, Ohio, from April 5, 1951, until adequate airport facilities are available for its use at that point (April 5).

E-5258 opinion and order deny application of Trans World Airlines for amendment of its certificate for route No. 2 to permit service to Santa Fe and Albuquerque, N. Mex., on the same flight (April 5).

E-5259 consolidates for hearing before an examiner of the Board, applications of Mid-West Airlines for the renewal of the term of its certificate, Docket No. 4052, for the extension of its route to Denver, Colo., and Cheyenne, Wyo., Docket No. 4466, and for the extension of its route to Fargo, N. Dak., Docket No. 4565; denies in all other respects (April 5).

E-5260 closes record in the *Southern Service to the West* case; allows parties to the proceeding 10 days to file statements of interest which may be adversely affected by such closing (April 5).

E-5261 extends until further order of the Board the effective dates of the amended certificates of Pioneer Air Lines for route No. 64, and of Trans-Texas Airways for route No. 82, issued by order serial No. E-510; authorizes Trans-Texas, subject to provision, to omit service to Dallas, Texas, on all flights in excess of one round-trip per day (April 5).

E-5262 denies petition of Alaska Airlines for reconsideration of the Board's opinion and order dated September 15, 1950, and approved by the President on December 27, 1950, (order serial No. E-4971) in the *Additional Service to Bethel and Nome case* (April 6).

E-5263 assigns for hearing the petition of the Police Jury of the Parish of Iberville and the City of New Iberia, La., insofar as it requests amendment of the certificate of Eastern Air Lines for route No. 5 so as to redesignate the intermediate point Lafayette-New Iberia, La., as Lafayette, La.; otherwise denies (April 6).

E-5264 institutes investigation into the operations of Consolidated Flower Shipments, Inc.-Bay Area, to determine whether it has been or is engaged in certain air transportation in violation of section 401 (a) of the Act and that all records be preserved by the company, and that the proceeding be assigned for a public hearing before an examiner of the Board (April 9).

E-5265 opinion and order grant, with stated limitations, the petition for intervention of Air Transport Associates, Inc., in Docket No. 2539, et al., in the matter of temporary and final mail rates for the interstate, overseas, and foreign operations of Northwest Airlines; otherwise deny (April 9).

E-5266 dismisses applications of Resort Airlines for certificate (April 9).

E-5267 dismisses proceeding instituted by order serial No. E-3131 in the matter of the certificate held by the Yellow Cab Company of Cleveland, Inc., for route No. 85 (April 9).

E-5268 dismisses application of American Overseas Airlines for change in approved service plan—foreign air transportation (April 9).

E-5269 dismisses application of Colonial Airlines for certificate (April 9).

E-5270 authorizes Pan American World Airways to suspend service at Washington, D. C., a coterminous point on its North Atlantic route until July 5, 1952; otherwise denies (April 9).

E-5271 withholds from public disclosure until final schedules are filed, on or before April 30, 1951, the information and data in the preliminary reports on Schedules A and B of CAB Form 41 for the 4th quarter of 1950, furnished by Northwest Airlines and Pan American World Airways (April 10).

E-5272 fixes certain temporary mail rates for Northwest Airlines over its routes within the continental United States insofar as authorized under certificates for interstate air transportation and over its routes between the United States and terminal points in Canada (April 11).

E-5273 fixes certain temporary mail rates for Northwest Airlines in its trans-Pacific operations (April 11).

E-5274 to E-5277 opinion and orders grant exemptions from the provisions of section 401 (a) of the Act to Randall K. Acock, d/b/a Acock Charter Service; James S. Magoffin, d/b/a Interior Airways; Robert E. Rice, d/b/a Bob Rice Air Taxi; and Homer O. Williams, d/b/a Arctic Circle Hot Springs Flying Service so as to engage in air transportation subject to stated conditions, between stated points in Alaska (April 11).

E-5278 grants petitions of Chicago and Southern Airlines and Capital Airlines to intervene in the *National DC-6 Daylight Coach case* (April 12).

E-5279 fixes and determines final mail rates for Caribbean Airlines over its entire system (April 12).

E-5280 denies petition of Eastern Air Lines for reconsideration of the Board's order serial No. E-5161 in the matter of the application of Standard Air Cargo for an exemption (April 12).

E-5281 institutes investigation, suspends and defers use from April 15, 1951, to July 13, 1951, of certain reduced fares proposed by Alaska Airlines for air transportation of passengers between points in Alaska (April 12).

E-5282 opinion and order approve agreements, temporarily and subject to stated terms and conditions, between National Airlines and Pan American-Grace Airways (Docket 3785) for the interchange of equipment, and between Pan American World Airways and Panagra, known as the Through Flight Agreement, and a companion agreement between Pan American and W. R. Grace & Co. (Docket 3787); parties and intervenors given 30 days in which to file exceptions and briefs (April 12).

E-5283 grants American Airlines, Pan American World Airways, Eastern Air Lines, National Airlines, and Delta Air Lines permission to intervene in the matter of the application of Aero Finance Corporation for an exemption (April 13).

E-5284 authorizes Robinson Airlines Corporation to inaugurate service on or after April 15, 1951, at Binghamton, N. Y., on route No. 94 through use of Broome County Airport (April 13).

E-5285 grants the City of West Palm Beach and others leave to intervene in the matter of the application of Aerovias "Q", S. A., for a permit to engage in the transportation of persons, property, and mail between Havana, Cuba, and West Palm Beach, Fla. (April 13).

E-5286 grants the Postmaster General, the City and the Chamber of Commerce of Spokane, Wash., and others leave to intervene in the *Empire Certificate Renewal case* (April 13).

E-5287 amends certificate of Capital Airlines for route No. 14, so as to delete Baltimore, Md., as an intermediate point on segment 2; otherwise denies petition of Eastern Air Lines for reconsideration of the Board's order serial No. E-5131 (April 13).

E-5288 opinion and order in the *Additional Service to Kansas case* (service to Great Bend, Kansas) amend certificate of Continental Airlines for route No. 29 for 3 years, effective April 16, 1951, to include Great Bend, Kansas, as an intermediate point between Dodge City and Hutchinson, Kansas (April 16).

E-5289 opinion and order in the *Joiner Investigation case* order Eugene Joiner, his successors and assigns, on and after May 6, 1951, to cease and desist from engaging directly or indirectly in air transportation within the meaning of sections 1(10) and 1(21) of the Act, unless and until authorized by the Board (April 16).

E-5290 institutes investigation and assigns for hearing to determine whether Colonial Airlines and certain of its officers have failed to comply with stated provisions of the Act, the Economic Regulations, and the Uniform System of Accounts (April 13).

E-5291 corrects paragraph 1a of Board order serial No. E-5290 so as to refer to Part 241 of the Economic Regulations instead of Part 243, in the matter of the Investigation of the Practices and Conduct of Colonial Airlines and Certain of Its Officers (April 16).

E-5292 opinion and order terminate the proceeding in the Investigation of Routes and Operations of Western Airlines (April 16).

E-5293 dismisses complaint of Lakes Central Airlines in the matter of suspension and revocation of the certificate of Parks Air Lines (April 16).

E-5294 grants Dade County Port Authority, et al., represented by Greater Miami Traffic Association, leave to intervene in the matter of the application of Aerovias Guest, S. A., for amendment of its permit so as to include Hamilton, Bermuda, on its route between Mexico City, Mexico, and Madrid, Spain (April 16).

E-5295 extends for 60 days from and after April 15, 1951, the temporary exemption granted Chicago and Southern Air Lines by orders serial Nos. E-4429 and E-4992, subject to the

same terms and conditions set forth in order serial No. E-4429 (April 16).

E-5296 amends order serial No. 1019 to approve interlocking relationships arising out of the holding by Woodward M. Taylor of the positions of president and director of Catalina Air Transport and director of Catalina Island Steamship Line (April 17).

E-5297 amends order serial No. E-1006 to approve interlocking relationships arising out of the holding by Malcolm I. Renton of the positions of vice president, secretary, and director of Catalina Air Transport, vice president and secretary of Catalina Island Steamship Line, and vice president and secretary of Santa Catalina Island Company (April 17).

E-5298 approves interlocking relationships created by Jack L. Fennie's holding the positions of treasurer and director of Catalina Air Transport, vice president and assistant secretary of Catalina Island Steamship Line, and vice president and assistant secretary of Santa Catalina Company, so long as he continues in uninterrupted tenure (April 17).

E-5299 approves agreements between Mid-Continent Airlines and Eastern Air Lines relating to through-plane service between Kansas City, Mo., and Miami, Fla., via St. Louis, Mo., and other points on Mid-Continent's route No. 26 and certain points on Eastern's St. Louis-Louis-Miami segments of route No. 10; and between Braniff Airways and Eastern Air Lines for through one-plane service between Denver, Colo., and Miami, Fla., via Memphis and certain points on the Denver-Memphis-Miami segment of Eastern's route No. 10; exempts Braniff, Eastern and Mid-Continent from certain requirements of section 408 of the Act; except as granted, denies petition of TWA for reconsideration of order No. E-5152 (April 17).

E-5300 consolidates into Docket No. 4852, the *Empire Certificate Renewal case*, the applications of Inland Airways, Docket No. 3506, West Coast Airlines, Docket No. 3128, and United Air Lines, Docket No. 4873 (April 17).

E-5301 extends from April 17, 1951, to May 17, 1951, approval of an agreement between Eastern Air Lines and Northeast Airlines providing for the leasing of Northeast's Convair aircraft to Eastern for use on Eastern's New York-Washington route; exempts the two carriers from section 408 of the Act so as to permit performance of the agreement (April 17).

E-5302 denies petition of Chicago and Southern Airlines for reconsideration of order serial No. E-4810 in the matter of the application of Park Airline, for authority to suspend service temporarily at Cairo, Ill., Muscatine, Iowa, and Poplar Bluff, Mo., on segment 5(b) of route No. 107 (April 17).

E-5303 approves, with stated provisions, the interlocking relationships existing as a result of the holding by Harry C. Murphy of a directorship or offices with Railway Express Agency, Incorporated, or affiliated companies, while holding a directorship and/or any offices or offices in persons specifically designated (April 18).

E-5304 orders E. W. Wiggins Airways to show cause why the Board should not fix certain temporary mail rates for mail transported over its entire system (April 19).

E-5305 orders Central Airlines to show cause why the Board should not fix certain temporary mail rates for mail transported over its entire system (April 18).

E-5306 authorizes Pacific Northern Airlines to suspend service over its route between Anchorage and Flat, Alaska, until 60 days after final disposition by the Board of the proceeding in Docket No. 4806 (April 19).

E-5307 amends order serial No. E-490 so as to authorize Pan American World Airways to suspend service temporarily over its route between Fairbanks and Bethel, Alaska, until 60 days after final disposition by the Board of the proceeding in Docket No. 4436; otherwise denies (April 19).

E-5308 dismisses proceeding of investigation and suspension of reduced round-trip fares and rules and regulations proposed by Standard Air Cargo for the air transportation of military personnel (April 19).

E-5309 grants the City and Chamber of Commerce of Freeport, Ill., and others, leave to intervene in the *North Central Route Investigation case* (April 20).

E-5310 opinion and order amend permit of British Overseas Airways Corporation to include Boston, Mass., as an intermediate point on its route between London, England, and Prestwick, Scotland, and New York, N. Y., subject to restriction (April 29).

E-5311 amends order serial No. E-5102 to broaden the scope of the proceeding of investigation in the *Empire Certificate Renewal case* so as to include the issue of suspension of service by United Airlines at The Dalles, Oreg., and the need for improvement of service at Walla Walla, Wash. (April 20).

E-5312 grants the City of Phoenix, Ariz., leave to intervene in the matter of the *Reopened Additional California-Nevada Service case* (April 20).

E-5313 orders Cordova Air Service to show cause why the Board should not fix certain temporary mail rates for mail transported over its routes certificated for transportation of mail (April 23).

E-5314 dismisses application for approval of certain interlocking relationships filed by Imperial Airways and Hugh McLeod Fenwick (April 23).

E-5315 authorizes, with stated provision, Southwest Airways Company to omit one short-of-terminal flight on segment 2, route No. 76 to Oroville, Calif., nightly, until adequate lighting facilities are provided; otherwise denies (April 23).

E-5316 approves certain agreements relating to intercompany arrangements involving Slick Airways, Edward T. Molitor, d/b/a Standard Truck Line, various air carriers, and other carriers (April 23).

E-5317 extends for 6 months from May 3, 1951, the temporary exemption granted Continental Air Lines by Board orders Nos. E-4677 and E-4800, insofar as it permits Continental to furnish free interstate air transportation to technical employees of Bendix Aviation Corporation and Pratt & Whitney Aircraft, Division of United Aircraft, subject to same terms and conditions set forth in said Orders (April 23).

E-5318 grants Reeve Aleutian Airways exemption until 60 days after the Board's final disposition of Reeve's application in Docket No. 4079 from the provisions of section 401(a) of the Act and section 292.2(b) of the Economic Regulations.

(Continued on page 81)

exam
susp
rating
confon
and
Priv
ton,
the
Stud
Oregon
Stud
suspe
gested
Priv
Kans
the
Nebr
airca
distan
instru
Con
homa
craft
mitt
than
Priv
Wash
time
for bu
passag
Priv
Idaho
aircraf
startin
or pr
another
Priv
Tex
his ai
ceilin
Priv
suspe
suspe
carryin
of tak
in a
causin
Com
Calif.
as he
pertai
prosac
without
Priv
pende
the B
Airpor
follow
was
Priv
suspe
suspe
carryin
of tak
in a
causin
Com
Calif.,
as he
pertai
prosac
without
Priv
suspe
suspe
carryin
Com
Calif.,
aircraf
instru
manag
when
antenn
Priv
suspe
suspe
carryin
Com
suspe
suspe
acrob
for fa
Priv
suspe
suspe
order
Par
Staun

Suspensions and Revocations

Recent initial decisions by Civil Aeronautics Board examiners suspending or revoking certificates include the following:

Suspensions

Commercial pilot certificate of Paul W. Engle, Boise, Idaho, suspended 6 months from January 8 for low flying over several cities and towns in Idaho when distributing handbills and operating a public address system from his plane, for failure to conform with the traffic pattern at several airports in the state, and various other violations.

Private pilot certificate of Gail E. Bliss, Des Moines, Washington, suspended 90 days from December 31 for low flying over the congested area of Des Moines.

Student pilot certificate of Robert J. Stephens, Heppner, Oregon, suspended 60 days from January 7 for low flying over the congested area of Grangeville, Idaho.

Student pilot certificate of Richard L. Heinbach, Hawa, Pa., suspended 6 months from January 3 for low flying over the congested area of Lewistown, Pa.

Private pilot certificate of Howard H. Short, Overland Park, Kansas, suspended 30 days from January 5 for low flying over the congested area of Overland Park.

Private pilot certificate of Corwin J. Hargreroad, Hastings, Nebraska, suspended 30 days from January 2 for operating an aircraft in closer proximity to other aircraft than the minimum distance permitted and for failure to observe traffic control instructions when making a landing.

Commercial pilot certificate of Ellis L. Brown, Duncan, Oklahoma, suspended 4 months from January 3 for operating an aircraft carrying a passenger at an altitude lower than that permitted, for operating such aircraft when it was of a type other than one for which he was rated, and for failure to have his pilot certificate in his personal possession.

Private pilot certificate of Leonard Elwood Clark, Des Moines, Wash., suspended 6 months from February 2, and until such time as he shall pass a written test on the Civil Air Regulations, for buzzing the congested area of Des Moines and making low passes over water in the vicinity of Des Moines.

Private pilot certificate of Richard H. Sleep, Bonners Ferry, Idaho, suspended 30 days from February 11 for operating an aircraft in a careless and reckless manner. The pilot, after starting the engine, left the aircraft without chocking the wheels or properly setting the hand brake. The aircraft rolled into another aircraft causing considerable damage.

Private pilot certificate of Kenneth W. Clemens, Port Noches, Tex., suspended 60 days from December 4 for failing to surrender his airman certificate when ordered to do so in a previous proceeding.

Private pilot certificate of Marion C. Reeves, Athol, Idaho, suspended 6 months from February 10 for buzzing a tavern in the vicinity of Athol at such a low altitude that he struck high tension wires located about 25 feet from the tavern.

Private pilot certificate of Karl Jernes, Portland, Ore., suspended 30 days from February 11 for low flying in the vicinity of the Booneville power crossing, about 10 miles from the Portland Airport. At the time of flight, rescue operations were in progress following an accident at the power crossing and the aircraft was still suspended from the wires.

Private pilot certificate of Orvin K. Howarth, Portland, Ore., suspended 90 days from February 11 for operating an aircraft carrying a passenger when he had not made the required number of take-offs and landings within the preceding 90 days.

Private pilot certificate of Robert E. Unruh, Fresno, Calif., suspended 60 days from February 2 for low flying over a congested area of Fresno. During the flight the engine ran out of gas and the pilot failed to switch tanks. In attempting to land in a small vacant space, the pilot misjudged his approach causing a crash that washed out the plane.

Commercial pilot certificate of Julius A. Ratermann, Montebello, Calif., suspended 30 days from February 2, and until such time as he shall pass a written exam on the Civil Air Regulations pertaining to instrument flying, for executing an instrument approach and letdown at the Los Angeles International Airport without obtaining clearance from traffic control.

Private pilot certificate of Alfred R. Eubanks, Sunnyvale, Calif., suspended 30 days from February 2 for entering a control zone without maintaining radio contact with traffic control and for failing to observe the traffic pattern at Moffett Field, Sunnyvale.

Student pilot certificate of Walter A. Bales, Tulare, Calif., suspended 6 months from February 2 for operating an aircraft carrying a passenger on a flight from Visalia to Tulare.

Commercial pilot certificate of Harold T. Cain, Long Beach, Calif., suspended 3 months from February 23 for operating an aircraft under instrument conditions when he did not hold an instrument rating and for operating an aircraft in a careless manner in that he took off from the Long Beach Municipal Airport when visibility was practically zero, and in doing so struck an antenna on the tower roof.

Private pilot certificate of Richard Fladox, Fort Worth, Texas, suspended 6 months from February 24 for low flying in the vicinity of Eagle Mountain Lake, Texas.

Commercial pilot certificate of Wilbert T. Cates, Fargo, N. D., suspended 60 days from February 8 for low flying and performing acrobatic maneuvers in the vicinity of Hector Field, Fargo, and for failing to conform to the traffic pattern at said field.

Private pilot certificate of Charles N. Swain, Houston, Texas, suspended 60 days from March 2, or from the date his certificate is surrendered, for failure to surrender his certificate when ordered to do so in another proceeding.

Parachute technician certificate of Theodore J. Dworszynski, Staunton, Ill., suspended 90 days from February 26 for repacking

parachutes when he did not have the required facilities for such operations, for failing to affix his seal on repacked parachutes and for failing to make an annual report of his operations.

Commercial pilot certificate of Ethan E. Longbrake, Dallas, Texas, suspended 90 days from February 24 for low flying in the vicinity of Lake Worth, Texas.

Commercial pilot certificate of James M. Lee, Taylor, Texas, suspended 60 days from February 16 for low flying over the highway between Mathis and Calallen, Texas.

Private pilot certificate of Richard P. Hilton, St. Louis, Mo., suspended 30 days from February 5 for operating an aircraft when the registration certificate and operations limitations were not carried in the aircraft.

Student pilot certificate of Roland Esterly, Des Plaines, Ill., suspended 6 months from February 8 for low flying in the vicinity of O'Hare Field, Park Ridge, Ill., for failing to maintain contact with traffic control and for failing to conform to the traffic pattern for the airport.

Private pilot certificate of Antoine M. Martineau, Milwaukee Wis., suspended 6 months from February 12 for low flying over a congested area of Milwaukee.

Commercial pilot certificate of Arlo R. Liebler, Langdon, N. D., suspended 60 days from February 5 and his mechanic certificate suspended 30 days from February 5 for performing acrobatics while carrying passengers when the occupants were not equipped with parachutes, failing to conform with the traffic pattern for the Sky Ranch Airport, Fargo, N. D., operating an aircraft that had not been given an annual inspection, and failing to repair the aircraft with materials that would restore it to its original airworthy condition.

Commercial pilot certificate of Lester V. Hahn, Milwaukee, Wis., suspended 3 months from February 13 for low flying in the vicinity of Elba Lodge, Slinger, Wis., and for performing acrobatics at a low altitude in the vicinity of Big Cedar Lake, Wis.

Private pilot certificate of Charles C. Bragg, Lansing, Mich., suspended 6 months from February 6 for failing to familiarize himself with available information pertinent to his flight and for operating an aircraft within the control zone of the Detroit City Airport, during IFR conditions without obtaining clearance from traffic control.

Private pilot certificate of Woodrow Barnes, Gary, Ind., suspended 60 days from February 12 for operating an aircraft during instrument weather when he did not hold an instrument rating and the aircraft was not equipped for instrument flight. While attempting to land on the Cole Sky Ranch in a light fog, the weather closed in. The pilot attempted a climbing turn, dropped his nose to avoid a stall, and crashed into the ground. Private pilot certificate of William C. Alford, Harrodsburg, Ky., suspended 6 months from February 8 for low flying in the vicinity of Shelbyville, Ky. The flight ended when the aircraft struck an electric light line and crashed.

Commercial pilot certificate of Herman L. Byrd, Nashville, Tenn., suspended 60 days from February 10 for low flying over a crowded swimming pool in the vicinity of Franklin, Tenn.

Commercial pilot certificate of John E. Payne, Atlanta, Ga., suspended 3 months from February 5 for performing acrobatic maneuvers at a low altitude in the vicinity of Ocracoke Island, N. C.

Private pilot certificate of Howell C. Jones, Jr., Greenville, S. C., suspended 6 months from February 20 for operating an aircraft that had not been certified as airworthy and for flying after the hours of darkness without displaying position lights.

Private pilot certificate of Robert A. Wall, Savannah, Ga., suspended 60 days from February 23 for operating an aircraft on a passenger carrying flight when the annual inspection had not been completed and for failing to carry airworthiness and registration certificates in the aircraft during such flight.

Private pilot certificate of Louis Wichainsky, Hurleyville, N. Y., suspended 60 days from February 28 for operating an aircraft in a careless manner while making a landing on the Monticello-Sullivan County Airport, Monticello, N. Y. While landing, the aircraft struck a transit and narrowly missed a surveyor who was working on the field.

Private pilot certificate of William Patterson, Baltimore, Md., suspended 6 months from February 28 for low flying over a congested area of Baltimore, Md.

Private pilot certificate of George E. Funk, Hershey, Pa., suspended 60 days from February 24 for operating an aircraft in a careless manner in that he became involved in an instrument flight when he did not hold an instrument rating. The flight ended when the aircraft crashed after striking some trees on a mountain side in the vicinity of McConnellsburg, Pa.

Private pilot certificate of William R. Wolfe, Royersford, Pa., suspended 6 months from February 24 for operating an aircraft in a reckless and careless manner in that he flew at a low altitude over a heavily wooded area of White Deer Valley, Milton, Pa., attempting to spot game animals. While attempting to drop a note to a hunter on the ground he crashed into the tree tops, demolishing the aircraft and seriously injuring himself and his passenger.

Private pilot certificate of Myron Greenberg, New York, N. Y., suspended 6 months from February 7 for operating an aircraft after his medical certificate had expired.

Student pilot certificate of David L. Seeley, Boston, Mass., suspended 6 months from March 27, and until such further time as he shall pass a written examination on the air traffic rules portion of the Civil Air Regulations, for low flying in the vicinity of Portland, Ore.

Private pilot certificate of Vernon H. Baker, Venice, Calif., suspended 90 days from March 30 for entering the Los Angeles control area without filing a flight plan and for operating an aircraft in the vicinity of the Los Angeles International Airport under instrument conditions when he did not hold an instrument rating.

Private pilot certificate of Gordon R. Hoover, Storm Lake, Iowa, suspended 60 days from March 23 for failing to conform to the traffic pattern for the Municipal Airport, Storm Lake.

Private pilot certificate of William J. O'Connell, Jr., Richmond, Va., suspended 9 months from March 31 for low flying over the congested area of Raleigh, N. C.

Private pilot certificate of John W. Lehman, Martinsburg, Pa., suspended 60 days from March 13 for failing to make a report of an accident in which he was involved.

Private pilot certificate of Winston F. Callan, Wichita Falls, Tex., suspended 6 months from March 28 for flying at tree-top level in the vicinity of the Rock Creek section of Maryland.

(Continued on page 78)

Helpful Publications

Publications listed below are on sale by the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Orders must be accompanied by money order or check made payable to the Superintendent of Documents.

Flight Assistance

Airman's Guide and Flight Information Manual

(\$6 a year)
(The Airman's Guide, published every 2 weeks, contains three sections: Directory of Airports, Radio Facility Data, and Notices to Airmen. The Flight Information Manual supplements the Airman's Guide and is issued semiannually.)

Airports

Airport Buildings

(\$20 cents)
(Problems of airport building design are discussed and several solutions suggested.)

Airport Design

(\$30 cents)
(Provides basic information on airport construction.)

Airport Drainage

(\$30 cents)
(Contains information helpful in developing an efficient and economical airport drainage system.)

Airport Landscape Planting

(\$15 cents)
(Provides practical information on how to improve the appearance of an airport.)

Airport Turfing

(\$25 cents)
(Describes various problems involved and presents methods used in establishing and maintaining a good turf.)

Seaplane Facilities

(\$25 cents)
(Answers problems posed by the planning and construction of seaplane bases.)

Small Airports

(\$15 cents)
(Answers to many problems confronting communities or individuals who want to build a small airport.)

Standard Specifications for Construction of Airports

(\$2.25)
(Contains specification items for construction of airports and air parks. Covers clearing and grubbing, grading, drainage, paving, lighting, turfing, and incidental construction.)

Flight Training

Aircraft Powerplant Handbook

(\$1.25)
(For students, mechanics, pilots, and engineers who have only superficial knowledge of aircraft powerplant fundamentals.)

Facts of Flight

(\$0.50 cents)
(A nontechnical manual, with chapters on airplane flight, stalls, spins, airplane structure, airplane engines, flying the plane, airport traffic, seaplanes, and safety in flight.)

Path of Flight

(\$0.40 cents)
(Practical information about basic navigation of aircraft, presented in brief form for the use of the private pilot.)

Realm of Flight

(\$0.60 cents)
(Presents practical information about the effect of atmospheric conditions upon flight.)

Flight Instructor Oral Examination Guide

(\$0.50 cents)
(Prepared as an aid to the prospective applicant for a flight instructor rating.)

Personal Aircraft Inspection Manual

(\$5 cents)
(Contains information dealing with the fundamentals of inspection and provides a general maintenance guide for the owners of personal type aircraft.)

Miscellaneous

ANC Procedures for the Control of Air Traffic

(\$0.40 cents)
(Officially approved manual of air traffic control procedures adopted for use by civil and military air traffic control personnel. These procedures are required to be followed by all civil controllers holding certificates under Part 26 of the CAR.)

Industrial Flying

(\$0.10 cents)
(A brief description of various uses for the airplane in industrial flying.)

Student Pilot Guide

(\$0.10 cents)
(Presents information of particular importance to student pilots during the early stages of flight training.)

Terrain Flying

(\$0.25 cents)
(Describes the special problems and hazards encountered in flying over various kinds of terrain and proper precautions.)

The Air Fair

(\$0.20 cents)
(Gives detailed help in planning and operating an air fair.)

Florida Leads, Alabama Second In '50 Air Marker Installations

Florida led all the states in 1950 in installation of air markers, with 165 new ones completed, a tabulation of reports showed.

Alabama, reporting 141 new markers, was second; Nebraska was third with 140; Wisconsin, fourth with 118; New York, fifth with 115; and Minnesota, sixth with 109.

In its efforts to get all communities air-marked, the CAA has been cooperating with many groups of local citizens, and with the official state aviation commissions and departments. The greatest number of markers, usually result from definite programs supervised by the state aeronautics departments. In Florida, Waldron F. Schanz, State Aviation Supervisor of the Florida State Improvement Commission, conducted the state program for air-marking.

Suspensions and Revocations

(Continued from page 77)

Commercial pilot certificate of Donald J. Combs, Tujunga, Calif., suspended 30 days from Feb. 27 for operating an aircraft over the Hollywood Park Race Track, Inglewood, in the vicinity of the Los Angeles International Airport, without maintaining contact with traffic control when air traffic control was in operation.

Student pilot certificate of Joseph D. Greer, San Diego, Calif., suspended 90 days from Feb. 27, and until such further time as he passes a written examination on the Civil Air Regulations, for operating an aircraft that had not been given an annual inspection and for failing to make a report of an accident in which he was involved.

Private pilot certificate of Theodore R. Bechtchenow, Seattle, Wash., suspended 30 days from March 9 for low flying over a ranch house in the vicinity of Omak, Wash. The pilot, in an attempt to drop a note near the house, flew through some power lines located near the house and about 60 feet from the ground.

Commercial pilot certificate of James S. Kreitzberg, Choteau, Mont., suspended 45 days from March 9 for operating an aircraft in a careless and reckless manner while conducting a dusting operation. The pilot, at the end of a pass over the field, flew under power lines along a road bordering the field, striking a car traveling on the road. The impact forced the car to leave the road, killed one occupant and injured the others.

Private pilot certificate of Johnson L. Murphy, Jr., Denver, Colo., suspended 6 months from March 13 for operating an aircraft that was not in an airworthy condition and for failing to conform to the traffic pattern for the Velt Airport, Denver.

Commercial pilot certificate of Edward J. Plautz, Lewistown, Mont., suspended 90 days from March 3 for operating an aircraft in a careless and reckless manner and for failing to make a report of an accident in which he was involved. The pilot started the engine by hand at a time when two lady passengers were in the plane, neither of whom was familiar with the operation of an aircraft. When the engine started, the aircraft knocked down the pilot, ran along the ground for some 600 feet, and finally crashed into a telephone pole.

Commercial pilot certificate of George M. Svenson, San Francisco, Calif., suspended 60 days from March 8 for low flying over the Municipal Airport, Merced, Calif., and for failing to conform to the traffic pattern for the airport.

Private pilot certificate of Eugene A. Thompson, Brandt, N. D., suspended 15 days from March 8 for operating an aircraft carrying a passenger when he did not have a medical certificate in his possession and for failing to maintain a pilot log book showing his recent experience qualifications.

Private pilot certificate of Olin D. Remington, Oklahoma City, Okla., suspended 60 days from March 29, and until such further time as he shall pass a written examination on Part 60 of the Civil Air Regulations, for low flying over a congested area of Oklahoma City.

Student pilot certificate of Floyd B. Culberson, Fort Worth, Tex., suspended 4 months from March 21 for low flying over a congested area of Fort Worth.

Solo privileges of the student pilot certificate of Morris W. Szedely, Fort Worth, Tex., suspended until he passes written and flight tests showing his qualifications to fly solo, for flying outside the local area designated by his flight instructor and for operating an aircraft of a type not endorsed on his certificate.

Private pilot certificate of Norman W. Chumley, Little Rock, Ark., suspended 60 days from March 14 for operating an aircraft for hire.

Private pilot certificate of Lawrence B. McClanahan, Indianapolis, Ind., suspended 90 days from March 5 for operating an aircraft that was not in an airworthy condition and for failing to have a valid medical certificate in his personal possession.

Student pilot certificate of Hilton Oxendine, Lumberton, N. C., suspended 60 days from March 13 for operating an aircraft outside the local flying area and for operating the aircraft in a careless manner. The pilot, in attempting to land in a field on his farm in the vicinity of Fairmont, N. C., struck a power line on his approach and crashed into the ground.

Private pilot certificate of John W. Burns, Hialeah, Fla., suspended 60 days from March 10 for low flying over Miami, Fla.

Commercial pilot certificate of Oscar E. Olson, Portland, Ore., 30 days from April 2 for low flying, performing aerobatics within the Portland control zone and when all occupants of the aircraft were not equipped with parachutes, and other violations.

Commercial pilot certificate of James P. Ellis, Lewiston, Idaho, 30 days from March 27 for operating an aircraft on a flight between Spokane, Wash., and Lewiston, Idaho, during the hours of darkness without displaying position lights.

(Continued on page 79)

Scheduled Air Carrier Operations

[Source: CAB Form 41]

Domestic: April 1951

Operator	Revenue miles	Revenue passengers	Revenue passenger miles (000)	Passenger seat miles (000)	Revenue passenger load factor (percent)	Ton-miles flown		
						Express	Freight	United States mail
Trunk Lines								
American Airlines	5,456,721	393,391	189,499	239,638	79.08	657,780	2,650,637	1,060,533
Brannif Airways	943,118	64,835	22,259	33,166	67.11	88,104	156,497	119,328
Capital Airlines	2,056,017	154,976	48,617	79,830	60.90	224,539	384,758	142,160
Chicago & Southern Air Lines	625,306	36,437	13,640	18,685	73.00	57,206	60,263	48,310
Colonial Airlines	287,671	17,355	4,382	8,348	52.49	6,799	9,312	8,327
Continental Air Lines	493,513	20,254	7,236	14,219	50.89	10,712	41,889	20,657
Delta Air Lines	1,418,348	74,691	37,064	53,231	69.63	83,915	246,803	132,122
Eastern Air Lines	4,938,329	306,090	144,434	217,174	66.51	398,555	415,756	442,688
Illinois Air Lines	242,514	8,213	3,283	5,923	55.43	6,693	11,443	16,884
Mid-Continent Airlines	688,870	31,275	9,629	16,746	57.50	20,537	41,387	32,138
National Airlines	1,422,782	57,305	39,369	60,475	64.89	37,736	399,293	85,133
Northeast Airlines	331,803	34,111	6,365	10,211	62.33	15,902	24,288	10,799
Northwest Airlines	862,170	49,865	31,798	53,988	58.90	139,354	305,174	129,129
Trans World Airlines	4,134,453	178,076	122,866	162,146	75.77	649,507	1,222,131	909,369
United Air Lines	4,498,268	232,740	136,809	174,428	78.43	813,314	2,005,476	1,296,020
Western Air Lines	685,443	48,848	17,585	27,185	61.50	37,958	63,182	87,207
Trunk total	29,085,326	1,708,462	834,685	1,175,393	71.01	3,248,611	8,038,289	4,541,294
Feeder Lines								
All American Airways	267,982	16,409	2,306	5,628	40.97	11,400	0	3,519
Bonanza Air Lines	76,138	2,501	626	1,537	40.73	222	1,613	414
Central Airlines	117,999	1,608	269	1,791	15.02	0	0	1,699
Empire Air Lines	102,260	4,012	694	2,147	32.32	1,466	0	1,748
Frontier Airlines	354,750	7,073	1,840	7,095	25.93	5,272	27,152	8,123
Helicopter Air Service	26,757	0	0	0	0	0	0	1,735
Lake Central Airlines	90,915	2,252	371	2,014	18.42	6,041	0	1,146
Los Angeles Airways	29,714	0	0	0	0	0	0	4,132
Mid-Continent Airlines	80,352	3,269	644	1,687	38.17	3,254	2,994	1,436
Mid-West Airlines	59,802	148	23	239	9.62	0	0	532
Ozark Airlines	170,766	3,320	545	3,016	18.07	5,865	0	1,600
Piedmont Aviation	309,560	14,722	3,344	6,501	51.44	7,518	12,652	9,105
Pioneer Air Lines	322,681	13,506	3,471	7,744	44.82	4,171	12,715	5,054
Robinson Airlines	116,783	7,693	1,211	2,390	50.67	4,747	2,847	2,305
Southern Airways	258,006	7,479	1,350	5,418	24.92	7,609	0	1,484
Southwest Airways	205,995	11,003	2,084	4,326	48.17	3,997	11,592	4,088
Trans-Texas Airways	241,186	6,188	1,455	5,065	28.73	2,630	5,264	4,998
West Coast Air Lines	117,402	6,168	922	2,465	37.40	830	4,508	636
Wiggins, E. W. Airways	56,606	442	40	225	17.78	144	0	148
Wisconsin-Central Airlines	159,482	7,351	1,176	2,754	42.70	9,138	0	4,532
Feeder Total	3,165,186	115,144	22,371	62,042	36.06	74,304	81,337	63,434
Territorial Lines								
Caribbean-Atlantic Airlines	48,212	7,313	577	1,288	44.80	0	1,592	696
Hawaiian Airlines	235,707	24,321	3,117	5,044	61.80	8,617	55,804	3,462
Territorial total	283,919	31,634	3,694	6,332	58.34	8,617	57,396	4,158
Grand total	32,534,381	1,855,240	860,750	1,243,767	69.21	3,331,532	8,177,022	4,608,886

International and Overseas: April 1951

Operator	Revenue miles	Revenue passengers	Revenue passenger miles (000)	Passenger seat miles (000)	Revenue passenger load factor (percent)	Ton-miles flown			
						Express	Freight	United States mail	Parcel post
American World Airways:									
Atlantic Division	236,277	9,607	7,243	11,950	60.61	878	143,462	12,902	0
Latin American Division	263,626	2,101	4,524	11,293	40.06	0	120,023	8,186	0
Alaska Operations	139,260	1,983	2,446	6,315	38.73	0	52,652	2,715	189
Pacific Operations	76,305	4,406	3,437	3,968	86.62	0	2,681	1,717	137
312,211	5,039	7,035	18,141	38.78	0	21,657	38,678	0	0
National Airlines	114,645	8,832	2,286	6,182	36.98	959	26,546	1,018	0
Northwest Airlines	466,509	5,009	8,239	15,967	51.60	17,009	578,367	140,615	0
Total	7,837,188	162,980	196,454	346,813	56.65	4,094,923	1,539,818	1,625,969	148,000

Domestic Passenger Miles Flown (Total revenue and nonrevenue, in thousands)

	January	February	March	April	Total
Trunk	744,984	689,234	864,819	865,717	3,164,754
Feeder	18,080	17,205	22,774	24,014	82,073
Territorial	3,886	3,613	4,459	3,759	15,717
Total	766,950	710,052	892,052	893,490	3,262,544

Scheduled Air Carrier Operations

(Continued on page 80)

International and Overseas: January-April 1951, 1950

Operator	Revenue miles January-April		Revenue passengers January-April		Revenue passenger miles (000) January-April		Passenger seat miles (000) January-April		Revenue passenger load factor (percent) January-April	
	1951	1950	1951	1950	1951	1950	1951	1950	1951	1950
American Airlines	951,861	764,809	40,002	28,601	30,957	22,436	49,447	36,282	62.61	61.84
American Overseas Airlines (ceased opr. 9/26/50)	—	1,647,471	—	34,888	51,790	—	80,765	—	64.12	64.12
Braniff Airways	1,048,257	685,148	8,875	5,082	18,292	10,648	44,496	29,228	41.11	36.43
Chicago & Southern Air Lines	548,779	712,826	9,213	7,693	10,320	9,483	24,956	29,335	41.35	32.33
Colonial Airlines	255,319	114,240	12,838	3,200	10,108	2,489	13,276	5,081	76.14	48.99
Eastern Air Lines	547,560	246,480	11,158	5,619	13,713	5,843	32,220	12,224	42.56	47.80
National Airlines	478,130	272,073	42,551	28,737	11,147	7,652	25,978	14,663	42.91	52.19
Northwest Airlines	1,953,018	1,914,426	18,743	12,604	32,975	24,290	68,469	48,137	48.16	50.46
Pan American World Airways:										
Atlantic Division	4,705,089	3,685,880	102,366	42,282	136,810	89,463	216,021	136,427	63.33	65.58
Latin American Division	8,996,095	9,100,622	267,683	243,652	214,276	180,430	350,942	317,924	61.06	56.75
Alaska Operations	758,514	729,592	11,648	9,953	12,315	10,030	33,732	21,408	36.51	46.85
Pacific Operations	2,901,570	3,154,575	22,791	24,322	78,479	63,081	143,519	133,057	54.68	47.41
Pan American-Grace Airways	1,900,364	1,875,074	39,256	31,938	42,440	33,598	69,229	70,231	61.30	47.84
Trans World Airlines	3,839,349	3,623,626	35,891	31,208	92,623	84,316	168,574	124,029	54.95	67.98
United Air Lines	1,005,376	609,781	11,066	6,935	27,261	16,644	50,932	31,108	53.52	53.50
Uruba, Medellin & Central Airways	34,112	32,992	848	860	278	284	683	576	40.70	49.31
Total	29,923,393	29,169,615	634,929	517,574	731,994	612,477	1,292,474	1,090,475	56.64	56.17
Index 1950 = 100	102.58	122.67	100.00	100.00	119.51	100.00	118.52	100.00	100.84	100.00

Operator	Ton-miles flown							
	Express January-April		Freight January-April		United States mail January-April		Parcel post January-April	
1951	1950	1951	1950	1951	1950	1951	1950	1951
American Airlines	3,624	3,532	476,735	419,634	52,205	39,311	0	0
American Overseas Airlines (ceased opr. 9/26/50)	—	843,642	—	—	394,891	—	126,637	0
Braniff Airways	0	0	399,954	223,967	39,817	8,218	0	0
Chicago & Southern Air Lines	0	0	212,447	225,319	10,861	8,680	780	715
Colonial Airlines	0	0	19,691	12,858	5,429	799	584	261
Eastern Air Lines	0	0	58,036	150,716	72,459	18,434	0	1,034
National Airlines	6,334	77,587	92,534	0	4,082	4,649	0	0
Northwest Airlines	62,771	24,166	2,120,200	1,633,596	579,199	660,434	0	0
Pan American World Airways:								
Atlantic Division	3,513,596	2,360,001	0	0	1,228,505	758,009	333,112	224,687
Latin American Division	7,838,834	7,269,311	0	0	964,045	901,961	0	0
Alaska Operations	1,309,472	1,163,322	0	0	127,810	117,399	0	0
Pacific Operations	1,889,218	1,560,956	0	0	1,814,697	1,746,418	0	0
Pan American-Grace Airways	694,881	574,106	0	0	110,960	118,553	23,741	4,156
Trans World Airlines	0	0	2,051,057	1,740,904	1,130,551	871,654	179,242	143,700
United Air Lines	0	0	167,366	92,740	267,971	191,358	0	0
Uruba, Medellin & Central Airways	19,463	10,314	0	0	0	0	0	0
Total	15,338,193	13,886,887	5,598,020	4,499,734	6,408,591	5,840,768	537,409	501,190
Index 1950 = 100	110.45	100.00	124.41	100.00	109.72	100.00	107.23	100.00

Suspensions—Revocations

(Continued from page 78)

Private pilot certificate of William O. Mize, Jacksonville Beach, Fla.—60 days from April 7 for operating an aircraft within the control zone of the Municipal Airport, Atlanta, Ga., when the weather was below minimum, without prior authorization from air traffic control, and landing the aircraft at the airport without obtaining clearance from traffic control.

Private pilot certificate of Ralph T. Ambrose, Elizabeth City, N. C.—60 days from April 28 for failing to conform to the traffic pattern for the Roosevelt Airport, Portsmouth, Va., performing acrobatic maneuvers in the vicinity of said airport, and failing to keep available for inspection, appropriate aircraft and engine records.

Private pilot certificate of Orville H. Kiefer, Corpus Christi, Tex.—6 months from May 5 for buzzing persons fishing from a boat in Nueces Bay, near the mouth of the Nueces River, Corpus Christi.

Private pilot certificate of Betty E. Wikander, Portland, Ore.—60 days from April 3 for operating an aircraft on an attempted take-off from the Pearson Airport, Vancouver, Wash., when no airworthiness certificate was carried in the aircraft, and attempting a flight when the magnetos rpm drop during the pre-take-off run-up was much greater than normal. Immediately after take-off the engine failed and the plane crashed.

Private pilot certificate of J. J. Miller, Bozeman, Mont.—60 days from April 9 for operating an aircraft in the vicinity of Bozeman during the hours of darkness without displaying position lights.

Private pilot certificate of Forrest W. Waltz, Tucson, Ariz.—6 months from April 9 for low flying over the congested area of Tucson. The flight ended when the aircraft struck some power lines and crashed.

Commercial pilot certificate of Earl H. Shade, Los Angeles, Calif. 30 days from April 9 for failing to familiarize himself with weather information pertinent to his intended flight, operating an aircraft within the Los Angeles control zone without authorization from traffic control, and failing to follow the international approach procedures established for the Los Angeles International Airport when making his letdown.

Private pilot certificate of K. Branaman, South San Francisco, Calif.—3 months from April 23 for operating an aircraft on a flight from Palo Alto, Calif., to Yuba City, Calif., during instrument weather when he did not hold an instrument rating, and flying closer to cloud formations than the minimum distances permitted. The pilot became confused when the weather started

to close in and crashed into some trees after attempting to turn around and leave the area.

Private pilot certificate of Kenneth P. Harrison, Hobbs, N. Mex.—12 months from April 19 for low flying over the highway between Carlsbad and Hobbs. The flight ended when the aircraft struck some high tension wires and crashed, severely injuring the pilot and demolishing the aircraft.

Private pilot certificate of James L. Dama, West Memphis, Ark.—6 months from April 18 for low flying over the J-O-E Beck Plantation Store, located in the vicinity of Hughes, Ark. While flying at an altitude of about 30 feet, the aircraft hit some power lines and crashed.

Commercial pilot certificate of Lisbon L. Bernard, Houston, Tex.—15 days from April 21 for failing to observe the traffic pattern for the Parker Airport, Port Arthur, Texas, and starting the engine of an aircraft when no one was at the controls and the wheels had not been checked.

Private pilot certificate of Willie N. Cummings, Newport, Ark.—60 days from March 12 for piloting an aircraft for hire. The pilot had accumulated approximately 500 hours of flying time but had neglected to take the necessary examinations for commercial.

Commercial pilot certificate of George M. Kalanta, Astoria, N. Y.—90 days from April 10 for operating a seaplane in a careless and reckless manner in that he failed to have his intended landing area adequately marked and lighted and while making a night landing, struck a moored sailboat, causing damage to the boat and the aircraft.

Private pilot certificate of Alfred J. D'Amario, Goodfellow A.F.B., Tex.—6 months from April 3 for low flying in the vicinity of the Middle River, Back River; and the Rock Creek Section of Maryland.

Revocations

Student pilot certificate of Roger Beshens, Quakertown, Pa., revoked for low flying over the congested area of Quakertown. The aircraft subsequently crashed after stalled during an attempted landing on a farm.

Private pilot certificate of William W. Kirk, Visalia, Calif., revoked for failing to familiarize himself with all available information pertinent to his intended flight and for flying closer to cloud formations than the minimum distance permissible. The flight ended near Maricopa, Calif., when the pilot entered a fog bank, became lost, and crashed into the side of a hill.

Private pilot certificate of James E. Forsythe, Tucson, Ariz., revoked for failing to have the proper qualifications to hold any grade of pilot certificate. The Respondent burglarized the CAA office in Tucson, stole examination questions from said office and

used them in preparing himself for an examination that was subsequently given to him.

Student pilot certificate of Jack N. Sandlo, Cedar Rapids, Iowa, revoked for operating an aircraft carrying a passenger.

Private pilot certificate of Donald N. Bridges, Dayton, Ohio, revoked for operating an aircraft when no airworthiness certificate or special authorization for operation had been issued by the Administrator of Civil Aeronautics.

Commercial pilot certificate of George L. Lahmeyer, Wichita, Kansas, revoked for operating an aircraft in the vicinity of Wichita in a careless and reckless manner in that he flew at tree top level and within 90 feet of a heavily travelled highway.

Commercial pilot certificate of Jack W. McNeil, Honolulu, T. H., revoked for operating an aircraft while under influence of intoxicating liquor and for low flying over the congested area of St. Helena, Calif. While "buzzing" the town of St. Helena, the aircraft struck power lines and crashed, injuring the pilot and damaging the aircraft.

Student pilot certificate of Ira P. Hill, Houston, Texas, revoked for low flying and performing acrobatic maneuvers in the vicinity of Merritt Island, Florida, and for carrying a passenger on said flight.

Private pilot certificate of Robert B. Hellams, Jr., Clinton, South Carolina, revoked for operating an aircraft after the hours of darkness when it was not equipped with position lights. The pilot took off after dark from an unlighted airport and crashed a short time later while attempting to land.

Student pilot certificate of Alden D. Leavitt, Bangor, Maine, revoked for failure to conform to the traffic pattern at the Revere Airport, Revere, Massachusetts, and for carrying a passenger on said flight.

Private pilot certificate of Stanley Williams, Petaluma, Calif., revoked for low flying over the congested area of Petaluma and for operating an aircraft in a careless and reckless manner in the vicinity of Calistoga, Calif. The pilot took off from the Calistoga Airport, Calistoga, in a semi-stalled attitude and when over business district of the town, the aircraft stalled and crashed, injuring the pilot and his passenger.

Private pilot certificate of Larry A. Kirkbride, Los Angeles, Calif., revoked for operating an aircraft in a careless and reckless manner in that he landed the aircraft in the parking area of a Los Angeles city park close to numerous automobiles and persons in the area.

Student pilot certificate of Robert L. Niles, Los Angeles, Calif., revoked for operating an aircraft carrying a passenger and for operating an aircraft in a careless and reckless manner in that he took off from a Los Angeles city park when numerous cars and persons were in the area.

(Continued on page 83)

New Priorities Plan Helps Manufacturers

(Continued from page 73)

Small Aircraft Indispensable.—Since the war, with the continued encouragement and support of the CAA, smaller aircraft have become almost an indispensable tool of industry. Spraying and dusting by aircraft has grown by several hundred percent in recent years, and a large part of the Nation's agricultural economy is geared to the aircraft for pest control, for chemical weeding and even for some types of planting and reforesting operations.

Such activities as pipe line patrol, forest service, and transportation of technicians and materials by defense companies would be gravely handicapped if the small-plane industry were crippled during this rearmament period. From the national defense standpoint, too, small aircraft are almost indispensable in case of atomic or other disaster. They can make quick aerial damage surveys of a stricken area; they can bring in urgently needed technicians and medical supplies, even when roads are clogged by refugees or wreckage.

Until now, the small-plane industry has been turning out new aircraft, and the parts necessary to keep existing aircraft in operation, without any program for priority assistance. The Office of Aviation Defense Requirements has been able to obtain spot assistance in the case of a few items, such as carburetors and landing gears, but up to now this field of aviation generally has been an orphan so far as formal recognition by those responsible for high-level defense planning. The outlook for the future is more encouraging, however.

The Controlled Materials Plan.—Under the new plan, the DO rating system will be changed, and copper, steel and aluminum will be allocated to the basic manufacturers as necessary for various programs.

The Air Coordinating Committee has an Aircraft Claimant Division consisting of representatives of all the government agencies having claimant responsibilities in the aircraft program. These consist of CAA, CAB, ECA, and OIT plus the Air Force and Navy with the NPA representative as chairman.

This Division of the Air Coordinating Committee establishes the essential civil aircraft programs. Once such a program has been established and approved, it is forwarded to the Defense Production Administration, which is responsible for overall policy, and for establishing the priority of the various programs. The programs will come out of DPA in the form of documents called "program determinations." This program determination will be accompanied by an allocation for the copper, steel and aluminum in the quarter involved, or whatever portion is approved, depending on the availability of the materials.

In the case of new air carrier aircraft and their necessary maintenance parts, the same general coordination between military and civil production under the controlled materials plan is expected as was enjoyed under the DO rating system. This is necessary to produce an efficient flow of aircraft from production lines, whether the planes are intended for civil or military use.

The CAA, as claimant agency, submitted a proposed program to the ACC calling for production of up to 3,500 such planes a year, which was the 1950 production level. The ACC, however, cut this program to 2,500 aircraft. The DPA, in allocating material for this small-plane program, reduced the materials CAA calculated as needed for 2,500 aircraft by 20 percent.

Small-Plane Manufacturers.—Now, for the first time, the small-plane manufacturer has been recognized by high-echelon defense planning as

Scheduled Air Carrier Operations

(Continued on page 81)

Domestic: January-April 1951, 1950

Operator	Revenue miles January-April		Revenue passengers January-April		Revenue passenger-miles (000) January-April		Passenger seat-miles (000) January-April	
	1951	1950	1951	1950	1951	1950	1951	1950
Trunk Lines								
American Airlines	20,822,547	16,546,684	1,374,674	854,645	681,417	426,927	897,134	705,633
Brannif Airways	3,740,390	3,644,147	241,037	187,396	82,122	62,616	181,406	125,636
Capital Airlines	7,328,232	6,045,717	513,412	347,484	153,600	102,368	280,003	217,119
Chicago & Southern Air Lines	2,478,266	2,321,276	129,140	91,576	33,172	72,613	63,934	52,429
Colonial Airlines	1,120,666	890,848	67,652	46,769	17,379	12,475	32,757	51,201
Continental Air Lines	1,981,811	1,818,323	75,902	56,567	27,532	19,643	57,028	66,977
Delta Air Lines	5,584,936	4,862,576	277,241	196,057	139,850	95,428	226,894	176,366
Eastern Air Lines	19,858,709	18,192,912	1,166,202	80,806	587,375	426,859	882,923	676,366
Inland Air Lines	951,886	903,772	29,817	24,679	11,782	9,163	22,954	17,264
Mid-Continent Airlines	2,556,226	2,700,049	114,242	102,754	34,790	29,971	62,908	56,701
National Airlines	5,500,486	4,172,579	229,093	143,875	162,556	95,715	235,805	164,859
Northeast Airlines	1,273,779	1,052,213	120,576	85,857	22,531	15,944	39,298	33,588
Northwest Airlines	3,746,549	6,363,573	162,888	210,860	105,121	123,537	204,696	262,848
Trans World Airlines	15,571,919	13,729,714	594,723	398,854	419,632	268,714	613,116	479,870
United Air Lines	17,464,796	16,267,573	830,375	602,478	489,605	346,190	677,073	602,644
Western Air Lines	2,704,578	2,336,028	186,416	98,724	66,959	36,756	107,027	85,859
Trunk Total	112,685,776	101,847,984	6,113,340	4,254,279	3,056,535	2,105,478	4,527,875	3,733,028
Index (1950=100)	110.64	100.00	143.70	100.00	145.17	100.00	121.29	100.00
Feeder Lines								
All American Airways	959,657	876,282	51,082	30,654	7,151	4,288	20,153	18,402
Bonanza Air Lines	297,418	290,735	9,294	4,940	2,365	1,240	6,074	5,625
Central Airlines	462,048	556,275	5,602	2,100	985	243	7,142	1,669
Empire Air Lines	406,682	346,395	14,529	12,123	2,541	2,358	8,540	7,274
Frontier Airlines	1,421,342	975,393	27,394	14,448	6,967	3,897	28,427	18,841
Helicopter Air Service	101,600	101,118	0	0	0	0	0	0
Lake Central Airlines	339,584	215,652	7,000	2,131	1,149	331	7,496	2,435
Los Angeles Airways	117,007	109,474	0	0	0	0	0	0
Mid-Continent Airlines	297,865	236,169	11,403	2,206	2,206	6,255	—	—
Mid-West Airlines	236,169	461,703	713	1,833	98	266	946	1,845
Ozark Air Lines	450,157	804	8,804	1,320	—	—	7,549	—
Piedmont Aviation	1,178,674	1,048,488	48,152	29,969	11,020	6,160	24,753	22,019
Pioneer Air Lines	1,215,015	1,216,519	47,911	36,521	12,579	9,849	29,160	29,288
Robinson Airlines	425,927	337,684	25,622	13,998	8,767	2,189	8,494	6,476
Southern Airways	882,438	563,046	24,762	8,007	4,490	1,395	18,488	11,783
Southwest Airways	798,852	743,550	43,460	29,159	8,209	5,310	16,787	15,615
Trans-Texas Airways	904,096	967,190	22,189	15,325	5,364	3,546	18,986	20,310
West Coast Airlines	381,810	359,029	17,687	15,520	2,561	2,165	8,017	7,540
Wiggins, E. W., Airways	211,187	98,657	1,272	605	117	54	842	389
Wisconsin-Central Airlines	581,764	624,081	18,718	12,165	2,896	1,843	6,916	5,036
Feeder Total	11,669,292	9,891,271	385,597	229,693	75,994	45,134	225,025	174,047
Index (1950=100)	117.98	100.00	167.87	100.00	168.37	100.00	129.29	100.00
Territorial Lines								
Caribbean-Atlantic Airlines	211,163	189,473	34,783	26,422	2,739	2,148	5,706	4,673
Hawaiian Airlines	957,283	890,370	98,860	99,067	12,742	12,852	20,592	19,673
Territorial Total	1,168,446	1,079,843	133,643	125,489	15,481	15,000	26,298	24,346
Index (1950=100)	108.21	100.00	106.50	100.00	103.21	100.00	108.02	100.00
Grand Total	125,523,514	112,819,098	6,632,580	4,609,461	3,148,010	2,165,612	4,779,198	3,931,421
Index (1950=100)	111.26	100.00	143.89	100.00	145.36	100.00	121.56	100.00

being entitled to a program as part of the defense effort. Even the 20 percent cut in material allocations may not have too drastic an effect for a number of reasons. For one thing, materials allocations are in pounds, not number of planes, and substitute materials may be practical for some items. There is also a possibility that manufacturers will be permitted to use materials on hand during the third quarter of this year in addition to materials allocated.

Under the controlled materials plan, the dollar limitations of the present DO-rating system will be abolished, and the DO symbols will be changed. In a general way, manufacturers coming under authorized programs are expected to have equal priority in obtaining scarce materials.

Armed with a National Security Resources Board Task Group report, the Office of Aviation Defense Requirements and our Aviation Statistics Division are developing full information on the need for continued small-plane production.

If this group is able to produce sufficiently convincing data concerning the role of small aircraft in the defense effort, the Defense Production Authority can be expected to increase the materials allocations for the fourth quarter of the year so that more such planes can be produced.

CAM Supplements and Aviation Safety Releases

(Issued between June 1, 1951, and June 30, 1951, and obtainable from the CAA Office of Aviation Information, Department of Commerce, Washington 25, D. C.)

Aviation Safety Releases

No.	Date	Subject
348	6/19/51	Revised Requirements for Private Pilot Certificates.

CAM Supplements

CAM No.	Supplement No.	Date	Title
3	9	6/8/51	Dry-cell Batteries and Red Passing Lights.
4b	8	6/8/51	Red Passing Lights.
34	3	6/8/51	Knowledge and Skill—Flight Navigator Certificates
51	2	6/8/51	Practical Test Requirements for Original Issuance of a Ground Instructor Certificate and Rating.

Scheduled Air Carrier Operations

(Continued from page 80)

Domestic: January-April 1951, 1950

Operator	Revenue passenger load factor (percent) January-April		Ton-miles flown					
			Express January-April		Freight January-April		United States mail January-April	
	1951	1950	1951	1950	1951	1950	1951	1950
Trunk Lines								
American Airlines	75.95	60.50	3,151,189	1,753,963	11,679,054	9,078,516	4,437,025	2,881,240
Braniit Airways	62.49	49.84	407,007	308,322	628,740	475,588	509,730	396,890
Capital Airlines	57.00	47.15	901,046	664,588	1,652,833	2,442,684	595,946	436,214
Chicago & Southern Air Lines	66.52	51.88	256,304	165,118	261,153	237,619	208,478	180,466
Colonial Airlines	58.05	51.07	31,997	21,603	36,650	29,508	35,167	28,718
Continental Air Lines	48.28	38.86	46,537	28,682	192,302	123,476	83,618	64,340
Delta Air Lines	67.26	57.81	422,864	270,459	1,270,597	811,134	570,658	380,664
Eastern Air Lines	66.31	63.11	2,064,400	1,297,032	1,782,118	4,020,582	1,911,762	1,613,359
Inland Air Lines	51.24	58.08	28,414	15,363	46,043	33,300	68,842	32,134
Mid-Continent Airlines	55.30	52.86	86,045	67,478	173,697	140,237	130,175	99,796
National Airlines	68.94	58.06	167,548	234,384	1,723,056	821,953	350,808	245,429
Northeast Airlines	57.33	47.47	75,659	51,195	79,876	60,263	45,602	36,814
Northwest Airlines	51.35	47.00	670,184	504,824	1,366,141	1,883,695	651,977	887,576
Trans World Airlines	68.44	56.00	2,985,134	1,568,595	5,203,262	3,721,187	3,681,449	2,662,114
United Air Lines	72.31	57.45	3,919,580	2,458,598	8,551,930	7,968,255	5,191,596	3,548,032
Western Air Lines	62.39	42.81	147,965	137,324	242,581	193,355	366,130	204,078
Trunk total	67.50	56.40	15,361,873	9,557,534	34,889,983	32,041,202	18,832,953	13,697,864
Index (1950=100)	119.68	100.00	160.73	100.00	108.89	100.00	137.49	100.00
Feeder Lines								
All American Airways	35.48	23.30	51,137	26,841	0	0	15,081	11,894
Bonanza Air Lines	58.94	22.04	786	370	4,215	3,175	1,636	1,535
Central Airlines	13.79	14.56	0	0	0	0	6,390	5,143
Empire Air Lines	29.75	32.42	5,356	3,994	0	0	7,575	5,688
Frontier Airlines	24.51	21.25	20,332	14,110	79,570	41,755	33,451	16,999
Helicopter Air Service	—	—	0	0	0	0	7,274	5,806
Lake Central Airlines	15.38	13.59	40,921	3,391	0	0	5,158	3,321
Los Angeles Airways	—	—	0	0	0	0	16,614	13,522
Mid-Continent Airlines	35.27	—	15,083	—	12,959	—	5,668	—
Mid-West Airlines	10.36	14.42	0	0	0	0	2,272	5,500
Ozark Air Lines	17.49	—	21,130	—	0	0	3,585	—
Piedmont Aviation	44.52	27.98	33,279	17,200	43,465	26,380	19,179	13,629
Pioneer Air Lines	43.14	33.63	16,477	12,940	46,110	35,934	32,982	31,746
Robinson Airlines	46.81	33.80	20,031	9,905	12,822	10,349	8,580	6,744
Southern Airways	24.29	11.84	24,325	10,938	0	0	28,420	12,838
Trans-Texas Airways	48.90	34.01	15,078	11,919	56,554	40,191	16,768	14,609
West Coast Airlines	28.25	17.46	10,015	9,016	20,760	17,205	14,655	16,982
Wiggins, E. W., Airways	31.94	28.71	3,060	3,066	15,360	0	2,204	2,703
Wisconsin-Central Airlines	13.90	13.88	144	0	0	0	454	456
Feeder Total	33.77	25.93	300,858	135,262	291,815	174,989	242,989	176,982
Index (1950=100)	130.24	100.00	222.43	100.00	166.76	100.00	137.30	100.00
Territorial Lines								
Caribbean-Atlantic Airlines	48.00	45.97	0	0	8,389	9,375	3,006	3,705
Hawaiian Airlines	61.88	65.38	34,175	40,247	219,125	182,107	14,008	17,214
Territorial Total	58.87	61.61	34,175	40,247	227,514	141,482	17,014	20,919
Index (1950=100)	95.55	100.00	84.91	100.00	160.81	100.00	81.33	100.00
Grand Total	65.87	55.08	15,696,906	9,733,043	35,409,312	32,357,673	19,092,956	13,895,765
Index (1950=100)	119.59	100.00	161.27	100.00	109.43	100.00	137.40	100.00

Development of Local Service Operations

(Continued from page 75)

type of operation. The Board concluded that the carriers with single-engine equipment then in operation were sufficient for the purpose of its experiment. *

The second development to emerge in Board thinking in regard to development of local air service since 1949 was concerned with the question of separating certain small-city traffic points from main trunkline route systems when they proved unprofitable to the trunkline carrier, and if geographically possible, placing them on the route pattern of a local air carrier.

Case History Valuable.—Mr. Nyrop then stated that "the case history which the Board is compiling on local air transportation operations since 1946 becomes more complete each year," he said. "We have learned, for instance, that much of the passenger traffic that was expected to be 'feeder' in character—that is, coming from small towns on the local airline and transferring to trunkline air service at major terminals—was not the principal passenger traffic movement that actually developed. Instead, much of the passenger service turned out to be truly local in character—passengers traveling from one small

city to another or from one small city into a major terminal.

"We learned also that small single-engine scheduled transport operations were economically unprofitable for local airline operations. They simply cannot carry enough when the demand is high and then business goes elsewhere. We also learned something that has been with us from the very beginning; that no entirely suitable transport aircraft is available for local service operations at this time."

The Chairman outlined the present policy of the Board as follows: "Those local air carriers whose economic operating record shows steady improvement, and where the record shows that a need for the service exists, will be granted permission to continue operation beyond the date of their original expiration period. However, where the operating record of a local carrier is economically depressing, where it shows that there is little need for the service—as in the case of Florida Airways—then the date of expiration of the carrier's temporary 3-year operating permission will be allowed to permanently expire. The Board intends to give the feeder line its opportunity."

Plane Demonstrated At Washington Airport

(Continued from page 73)

After final approval, the plans and specifications will be made available to manufacturers.

In the demonstration flight, Von Rosenberg showed how the plane is easily controllable at speeds as low as 45 miles an hour, and can turn back quickly at the end of a row of crops for the next pass. After several low-altitude runs and tight turns, he landed the plane and brought it to a stop in a space approximately three times the length of the plane.

The plane was loaded partially with spray for the flight, but can carry up to 1,200 pounds of spray or dust. It is able to lift this heavy load from unprepared fields, climb over obstacles such as power lines, and make tight turns, through a combination of high-lift wing, full-span slotted flaps, and slot-lip ailerons.

Spectators noted that the pilot sits high, giving him an exceptionally good field of vision. Other safety features pointed out are protection of the pilot in case of crash landings, by the long forward structure of engine and dust hopper, by the shoulder harness with inertia reel allowing freedom of action, and by the guide tubes over the cockpit; sharpened landing gear legs, and cable from cockpit to top of fin, in case wires are encountered in flight; and wide landing gear with heavy tires for landings on rough farm fields.

In the center of the wings are tanks holding a total of 150 gallons of spray, and a 27 cubic foot dust hopper will be installed in the fuselage in the near future. The plane can operate for more than three hours without stopping to refuel, and is designed for easy maintenance and repair while away from its base.

Charles F. Horne, Administrator of Civil Aeronautics, told a pre-demonstration luncheon that airplanes will perform an increasing variety of jobs in agriculture at home and abroad, and could serve as "a dramatic and forceful part of the Point Four Program."

He cited the 1950 record of 439 accidents in crop-control flying as indicating the need for an airplane which makes possible greater safety in such operations.

Today, CAA records show approximately 5,000 war surplus and other converted aircraft are used in dusting, spraying, seeding, fertilizing, and other agricultural operations. Half a billion pounds of chemicals, it is estimated, were spread by airplane over the farm lands of the United States.

Official Actions . . . CAB

(Continued from page 76)

insofar as they would prevent it from conducting charter and special trips between King Salmon (formerly Naknek) on the one hand, and Port Heiden, Chignik, Port Moller, King Cove, False Pass and Sand Point on the other (April 24).

E-5319 approves, subject to stated conditions, the common control and interlocking relationships existing as a result of the holding of positions by Arthur R. Currey and Mary E. Currey in Currey Air Transport Limited, and others (April 23).

E-5320 grants Midway Airlines exemption, until 60 days after the Board's final decision on Midway's application in Docket No. 4633, from the provisions of section 401(a) of the Act and the terms, conditions and limitations of its certificate, so as to permit it to serve Borger, Texas, as an intermediate point on segment 1 of route Chicago area; otherwise denies (April 23).

E-5321 denies application of Helicopter Air Service for a temporary exemption under section 401 of the Act so as to engage in fixed-wing service between Midway Airport and other designated airports in the Chicago area (April 24).

E-5322 grants Central Airlines exemption until 60 days after the Board's final determination in Docket No. 4083 from the provisions of section 401(a) of the Act, and the terms, conditions and limitations of its certificate, so as to permit it to serve Borger, Texas, as an intermediate point on segment 1 of route No. 81; otherwise denies (April 24).

E-5323 severs from Docket No. 3826 and assigns to Docket No. 4922 to that portion of the application of Services Aeron. S. A., which requests authority to provide passenger service between Havana and St. Petersburg, Fla.; denies motion for reconsideration of the Board's denial of its application for mail and property service between Miami and Havana (April 24).

Regulations of The Administrator

Through July 1, 1951

Note: Regulations of the Administrator marked with an asterisk (*) on the list given below may be obtained from the Superintendent of Documents, United States Government Printing Office, Washington 25, D. C., at the prices indicated. Remit check or money order, made payable to the Superintendent of Documents, directly to the Government Printing Office. Copies of amendments may be obtained free of charge from the Office of Aviation Information, CAA, Washington 25, D. C., or may be found in the Federal Register for the dates indicated in parentheses. Copies of the Federal Register are obtainable from the Superintendent of Documents.

Organization

*Part 400—Organization and Functions. (10¢.)

Procedures

*Part 405—General Procedures. (5¢.)
*Part 406—Certification Procedures. (10¢.)
*Part 407—Recordation Procedures. (5¢.)
*Part 408—Enforcement Procedures. (5¢.)
Amendment 1. (April 26, 1951.)

Rules

Airmen

*Part 450—Inter-American Aviation Training Grants. (5¢.)

Aircraft

Part 501—Aircraft Registration Certificates. (April 28, 1951.)
*Part 502—Dealers' Aircraft Registration Certificates. (5¢.)
*Part 503—Recordation of Aircraft Ownership. (5¢.)
*Part 504—Recordation of Encumbrances Against Specifically Identified Aircraft Engines. (5¢.)
*Part 505—Recordation of Encumbrances Against Aircraft Engines, Propellers, Appliances, or Spare Parts. (5¢.)
Part 506—Airworthiness Directive Recordation. (May 1, 1951.)
Part 514—Technical Standard Orders—C Series—Aircraft Components. (January 25, 1951.)

Airports

*Part 550—Federal Aid to Public Agencies for Development of Public Airports. (10¢.)
(Amendments 1-14 available from CAA.)
*Part 555—Acquisition of Government-owned Lands for Public Airport Purposes. (5¢.)
*Part 560—Reimbursement for Damage to Public Airports by Federal Agencies. (10¢.)
(Amendment 1 available from CAA.), Amendment 2 (June 29, 1951).
*Part 570—Rules of Washington National Airport. (5¢.)
(Amendment 1 available from CAA.) Amendment 2 (March 28, 1951).
*Part 575—Federal Civil Airports on Canton and Wake Islands. (5¢.)

Air Navigation

*Part 600—Designation of Civil Airways (including amendments 1 through 18). (15¢.)
(Amendments 19-50 available from CAA.)
*Part 601—Designation of Control Areas, Control Zones and Reporting Points (including amendments 1 through 22). (15¢.)
(Amendments 23-54 available from CAA.)
Part 612—Aeronautical Fixed Communications (June 19, 1951).
Part 617—Airport Traffic Control Rules. (April 21, 1951.)
*Part 620—Security Control of Air Traffic. (5¢.)
Amendment 1 (February 15, 1951), Amendment 2 (June 28, 1951).
*Part 625—Notice of Construction or Alteration. (5¢.)

Miscellaneous

Part 635—Reproduction and Dissemination of Current Examination Materials. (Available without charge from CAA.)

New RTCA Reports Available

The Executive committee of the Radio Technical Commission for Aeronautics has accepted the following reports of its special committees:

Special Committee 53—Paper 78-51/DO-41, "Protection Ratios for Carrier Current Systems Operating in the Frequency Band 200-415 kc" (20 cents per copy); Special Committee 13—Paper 76-51/DO-32, "Test Procedures Airborne Radio Equipment Operating Within the Frequency Range 30 Mc - 400 Mc" (\$1.00 per copy); and Special Committee 55—Paper 87-51/DO-42, "Definitions of Air Navigation Terms and Nomenclature of Electronic Navigation Systems" (30 cents per copy).

The reports are available from the RTCA secretariat, 1724 F St., N. W., Washington 25, D.C.

Air Regulations . . . July 1, 1951

TITLE	No.	Price	Date	Number of Amendments	Applicable Special Regulations
AIRCRAFT					
Certification, Identification, and Marking of Aircraft and Related Products	1	\$0.05	1/15/51		
Airplane Airworthiness: Normal, Utility, Aerobatic, and Restricted Purpose Categories	1 3	.15	11/ 1/49	6	SR-358,360
Airplane Airworthiness	1 4a	.20	4/ 7/50		SR-358,360
Airplane Airworthiness: Transport Categories	1 4b	.25	7/20/50	3	SR-358,360
Rotorcraft Airworthiness	6	.10	1/15/51		SR-358,360
Aircraft Airworthiness: Restricted Category	8	.05	10/11/50		
Aircraft Airworthiness: Limited Category	9	.05	11/11/49	1	
Aircraft Engine Airworthiness	13	.05	8/ 1/49	2	SR-358
Aircraft Propeller Airworthiness	14	.05	11/ 1/49	2	SR-358
Aircraft Equipment Airworthiness	15	.05	11/ 1/49	3	SR-358,360
Aircraft Radio Equipment Airworthiness	16	.05	2/13/41		
Maintenance, Repair, and Alteration of Certificated Aircraft and of Aircraft Engines, Propellers, and Instruments	18	.05	8/15/49		
ARMEN					
Pilot Certificates	20	.05	8/ 1/49	8	
Airline Transport Pilot Rating	21	.05	8/15/49	2	
Lighter-than-air Pilot Certificates	22	.05	11/ 1/49	6	
Mechanic Certificates	24	.05	9/ 1/49	4	SR-348
Parachute Rigger Certificates	25	.05	9/ 5/50	1	
Air-traffic Control-tower Operator Certificates	26	.05	11/ 1/49	4	
Aircraft Dispatcher Certificates	27	.05	11/ 1/49	3	
Physical Standards for Airmen	29	.05	10/ 1/49	2	
Flight Radio Operator Certificates	33	.05	2/15/50	4	
Flight Navigator Certificates	34	.05	11/ 1/49	3	
Flight Engineer Certificates	35	.05	11/ 1/49	3	
OPERATION RULES					
Air Carrier Operating Certification	40	.05	9/ 1/49		SR-349,351,353,356,363
Certification and Operation Rules for Scheduled Air Carrier Operations Outside the Continental Limits of the United States	41	.05	11/15/49	3	SR-349,356,360
Irregular Air Carrier and Off-Route Rules	42	.10	6/ 1/49	7	SR-337,349,350,360
General Operation Rules	43	.05	8/ 1/49	6	SR-360
Foreign Air Carrier Regulations	44	.05	9/ 1/49		
Commercial Operator Certification and Operation Rules	45	.05	11/15/49	1	SR-337,349,356
Operation of Moored Balloons	48	.05	9/ 1/49		
Transportation of Explosives and Other Dangerous Articles	49	.10	7/20/49		
AIR AGENCIES					
Airman Agency Certificates	50	.05	10/ 1/49	3	SR-354,355
Ground Instructor Rating	51	.05	10/10/49	2	
Regular Station Rating	52	.05	10/15/49		
Mechanic School Rating	53	.05	10/15/49		
Parachute Loft Certificates and Ratings	54	.05	10/15/49	1	
AIR NAVIGATION					
Air Traffic Rules	60	.10	8/ 1/49		
Scheduled Air Carrier Rules	61	.10	9/ 1/49	4	SR-349,350,356,363
Notice and Reports of Aircraft Accidents and Missing Aircraft	62	.05	5/ 1/49		

¹ Certain aircraft may comply with the provisions of this Part or Part 4a.

NOTE: Civil Air Regulations are on sale at the prices indicated by the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Remittances should be by check or money order, payable to the Superintendent. Amendments and special regulations may be obtained from the Publications Section, Civil Aeronautics Board, Washington 25, D. C.

CAA Manuals and Supplements . . . July 1, 1951

TITLE	No.	Price	Date	No. of Supplements	Amending Release
Production Certificates					
Airplane Airworthiness: Normal, Utility, Aerobatic, and Restricted Purpose Categories	02	\$0.10	8/ 1/46		
Airplane Airworthiness	04	.75	7/ 1/44		Nos. 193,202
Airplane Airworthiness: Transport Categories	4b	Free		6	
Rotorcraft Airworthiness	6	Free	4/ 3/51	5	
Aircraft Airworthiness: Restricted Category	8	.60	1/ 1/51	1	
Aircraft Propeller Airworthiness	14	.15	5/ 1/46		(Being revised)
Aircraft Equipment Airworthiness	15	Free			
Aircraft Radio Equipment Airworthiness	16	Free	2/13/41		Nos. 62,272
Maintenance, Repair, and Alteration of Certificated Aircraft, Engines, Propellers, and Instruments					
Pilot Certificates	18	1.25	8/ 1/49	1	
Air-Traffic Control-Tower Operator Certificates	20	Free	6/16/50	1	
Aircraft-Dispatcher Certificates	26	Free		3	
Flight Radio Operator Certificates	32	Free		2	
Flight Navigator Certificates	33	Free	6/16/50	2	
Flight Engineer Certificates	34	Free		1	
Air Carrier Operating Certification	35	Free	1/ 2/51	1	
Certification and Operation Rules for Scheduled Air Carrier Operations Outside the Continental Limits of the United States	41	Free		11	
Irregular Air Carrier Certification and Operation Rules	42	1.00	9/ 1/49	2	
General Operation Rules	43	Free		2	
Airman Agency Certificates	50	.15	5/15/46	3	No. 254
Repair Station Rating	52	Free		1	
Mechanic School Rating	53	Free	5/—/40		
Parachute Loft Certificates and Ratings	54	.15	7/ 1/48		
Instrument Approach Procedure	60	Free		5	
Scheduled Air Carrier Rules	61	Free		7	

NOTE: Manuals for which a price is listed may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Remittances should be by check or money order, payable to the Superintendent. Items marked "free" may be obtained from the CAA Office of Aviation Information, Department of Commerce, Washington 25, D. C.

Suspensions and Revocations

(Continued from page 79)

Student pilot certificate of Fred L. Hollister, Endicott, New York, revoked for operating an aircraft in the vicinity of Rush, Pa., carrying a passenger. During the take-off, the aircraft struck a tree and the passenger was killed.

Student pilot certificate of William F. Raynor, Center Moriches, L. I., New York, revoked for operating an aircraft while under the influence of intoxicating liquor, for flying in instrument weather when he did not have a valid instrument rating and for failing to familiarize himself with information pertinent to his flight. While attempting a take-off from the Mastic Airport, Mastic, New York, the aircraft crashed and was completely demolished.

Student pilot certificate of Byron B. Rowland, Lake Charles, La., whose certificate was revoked for a previous violation, prohibited from holding a certificate prior to June 23, 1955 for operating an aircraft while under the influence of intoxicating liquor and for flying as low as 30 to 50 feet above residences in the congested area of West Monroe, La.

Student pilot certificate of Frederick Burton, Corpus Christi, Texas, revoked for operating an aircraft outside of the practice area designated by his flying school and for low flying in the vicinity of Mustang Island, Texas, which is located in a danger zone. The pilot flew over the island at such a low altitude that his wing tip struck a sand dune causing the aircraft to cartwheel several times. The pilot was uninjured but the aircraft was demolished.

Private pilot certificate of Harold W. Bowen, Little Rock, Arkansas, revoked for low flying over the congested area of Perryville, Ark., and over the highway leading to the town. While executing steep dives and sharp pull-ups over the highway, the aircraft struck some trees and crashed.

Private pilot certificate of Henry Rommel, Fresno, Calif., revoked for low flying over the congested area of Fresno while under the influence of intoxicating liquor. The flight ended when the aircraft struck a pole in a vacant field near Fresno, injuring the pilot and demolishing the aircraft.

Private pilot certificate of Ferris B. McCoy, Parkdale, Oregon, revoked for low flying while under the influence of intoxicating liquor. During the flight the pilot "buzzed" several locations, and while "buzzing" the residential area of Hood River, Oregon, at tree top level, clipped the top of a tree and crashed into a telephone pole.

Private pilot certificate of Clemon E. Simmons, Yakutat, Alaska, revoked for making repairs on an aircraft following an accident when he was not the holder of a mechanic certificate, for putting the aircraft into service in an unairworthy condition, for operating an aircraft that had not been given an annual inspection, for failing to familiarize himself with available information necessary to a passenger carrying flight that resulted in a forced landing, and for various other violations.

Student pilot certificate of Howard G. Brockhart, Canby, Oregon, revoked for low flying and performing acrobatic maneuvers in the vicinity of Oregon City and Mulino, Oregon while carrying a passenger.

Private pilot certificate of Harland Kahl, Durant, Iowa, revoked for low flying and performing acrobatic maneuvers over the congested area of Durant at a time when a celebration was being held, and for performing such maneuvers within a civil airway.

Private pilot certificate of John P. Mulkeen, Dillingham, Alaska, revoked for operating an aircraft while under the influence of intoxicating liquor, taking the aircraft without the permission of the owner, colliding with another aircraft while preparing to take off from the Dillingham Airstrip, buzzing the airstrip, and flying cross-country under poor weather conditions.

Commercial operator certificate of Saturn Air Cargo, Burbank, Calif., revoked for failure to maintain any base, office or headquarters.

Student pilot certificate of Francis J. Picray, Jr., Des Moines, Iowa, revoked for operating an aircraft in a careless and reckless manner in that he flew over a residential area of Des Moines at an altitude of approximately 120 feet when he had knowledge that his engine was malfunctioning. The flight ended when the aircraft hit a tree and crashed in a back yard in the area.

Commercial pilot certificate of John P. Harrington, Houston, Miss., revoked for operating an aircraft at a low altitude about 2 miles from Vardaman, Miss. While carrying a passenger, the pilot made several passes over a house at a low altitude, hit high tension wires near the house, and after flying for about a half mile, struck a tree and crashed.

Private pilot certificate of Harold Hubbard, Homestead, Fla., revoked for operating an aircraft in the vicinity of the Municipal Airport, Homestead, while under the influence of intoxicants, for low flying and performing acrobatics within a civil airway, and for carrying an intoxicated passenger on such flight.

Student pilot certificate of Robert M. Harris, Orange, Va., revoked for low flying in the vicinity of Fredericksburg, Va., and for carrying a passenger on said flight.

Private pilot certificate of Albert V. Black, Luray, Va., revoked for low flying in the vicinity of Leakeville, Va., and exceeding the operational limitations of the aircraft. The pilot, with two passengers in the rear seat which was equipped with a safety belt for one, circled a house at a low altitude, struck some high tension wires, and crashed into the roof of a house.

Student pilot certificate of Eugene W. Hagen, Guthrie Center, Iowa, revoked for carrying a passenger.

Private pilot certificate of John H. Diologue, Anchorage, Alaska, revoked for operating an aircraft in the vicinity of Homer, Alaska, while intoxicated, and for carrying a passenger who was in an intoxicated condition.

Air agency certificate of Coulee City Flying Service and the flight instructor rating of Eleanor Hope revoked. The flying service, operated and controlled by Hope, collected certain monies from the Veterans Administration on the basis of instruction given to a student when such instruction had not been given, kept improper and untrue records in order to collect such monies, and indorsed the students log book for instruction not given.

Private pilot certificate of Alfred D. Silva, Somerville, Mass., revoked for operating an aircraft at an altitude as low as 150 feet over the congested residential area of Los Angeles, Calif.

Private pilot certificate of Stanley M. Mahoney, Benton, Wash., revoked for low flying and performing acrobatics at a low altitude.

Low flying over the Lake Wilderness Airstrip at a time when a crowd of persons had assembled to witness acrobatics scheduled that day. In making a slow and low approach, the pilot pulled up abruptly, stalled the aircraft and striking a sound truck parked outside the usable landing area.

Commercial pilot certificate of John H. Ostmeyer, Sharon Springs, Kans., revoked for flying at tree-top level over Stockton, Kans., and within 150 feet over its main street.

Private pilot certificate of Ralph Dillard, Edinburg, Tex., revoked for failing to surrender his certificate when ordered to do so.

Private pilot certificate of Donald E. Marney, Detroit, Mich., revoked for low flying in the vicinity of Two Harbors, Mich. The pilot landed on a highway forcing an occupied car into a ditch along the road.

Student pilot certificate of Wessley Crossley, Rockford, Ill., revoked for operating an aircraft on a passenger carrying flight. The flight terminated at Kirkland, Ill., when the aircraft crashed.

Student pilot certificate of Brainerd McGuire, Wichita Falls, Tex., revoked for low flying over the congested area of Easton, Conn.

Private pilot certificate of John Doe, Jacksonville, Fla.—failure to meet the physical standards for a pilot in that he suffers a mental disease that would interfere with his safe operation of an aircraft.

Student pilot certificate of Kenneth Overington, Queens Village, L. I., N. Y.—low flying and performing acrobatic maneuvers at a low altitude.

Private pilot certificate of Elmer Lawson, St. Louis, Mo.—operating an aircraft at a low altitude and in a careless and reckless manner near a row of houses in the vicinity of Potosi, Mo. The pilot flew the aircraft at an altitude of 5 to 10 feet above the ground and between two houses, failed to gain sufficient altitude to clear electric wires, and crashed after hitting some trees.

Private pilot certificate of William A. Tandrup, St. Louis County, Mo.—low flying in the vicinity of the Bell-Nor district of St. Louis County and operating an aircraft that was not in an airworthy condition.

Student pilot certificate of Samuel Hunter, Pierre, S. Dak.—operating an aircraft on a passenger-carrying flight in the vicinity of Omaha, Nebr.

Student pilot certificate of Harry L. Jenkins, Verndale, Minn.—carrying a passenger on a flight in the vicinity of Seward, Alaska.

Student pilot certificate of R. L. McElroy, Midlothian, Tex.—low flying over farm residences in the vicinity of Waxahachie, Tex., piloting an aircraft within 50 feet of persons standing at the side of a public road, and landing and taking off from a public road.

Student pilot certificate of Robert E. Griggs, Banning, Calif.—operating an aircraft on a passenger carrying flight in the vicinity of the Fullerton Municipal Airport, Fullerton, Calif., and other violations.

Private pilot certificate of Thomas C. Cooper, Pasadena, Calif.—low flying in Los Angeles County, Calif., and failing to notify the Administrator of a change in his permanent mailing address.

Private pilot certificate of Leland R. Allard, Patterson, Calif.—low flying over the Turlock Reservoir, Modesto, Calif. During the flight the aircraft struck some high tension wires near the reservoir but was able to make a safe flight back to the airport.

A and E mechanic certificate of Harry E. Hechler, Burbank, Calif.—representing himself to be the supervising mechanic on a major alteration and certifying that the alteration had been performed correctly when, in fact, he did not supervise the repair or inspect it. The repaired part subsequently failed in flight causing the aircraft to make a forced landing.

Private pilot certificate of Roberto Ruiz, San Diego, Calif.—transporting Mexican aliens for hire on a flight from Rosarito Beach, Mex., to Oxnard, Calif.

Private pilot certificate of Charles M. Barnes, Gordonsville, Va.—operating an aircraft in the vicinity of Gordonsville when he did not hold a valid medical certificate and refusing to appear for a re-examination. On the subject flight, the pilot became ill, lost control of the aircraft, and crashed into a pond.

Student pilot certificate of Gerald K. Novell, Norristown, Pa.—operating an aircraft on a cross-country flight when his certificate had not been endorsed for such flight, and operating an aircraft during the hours of darkness without displaying position lights. The pilot took off from Collegeville, Pa., became lost, and crashed after darkness while attempting to land on a chicken farm which he mistook for an airport.

Private pilot certificate of Alfred E. Gagnon, Manchester, N. H.—failing to familiarize himself with information necessary to his intended flight, taking off without obtaining air traffic clearance when the visibility was less than the minimum, and operating an aircraft within a control zone when the ceiling and visibility were below minimum. The pilot became lost shortly after take-off from the Concord Municipal Airport, Concord, N. H., and crashed while attempting to land in an open field.

Student pilot certificate of William T. Logan, Jr., Defiance, Ohio—carrying a passenger on a flight from the Bryan Municipal Airport, Bryan, Ohio.

A and E mechanic certificate of George Coulthard, Greenfield, Ohio—made entries in the aircraft and engine log books of an aircraft without the repairs being made.

Private pilot certificate of George H. Herbert, Jr., Beaufort, N. C.—low flying in the vicinity of Atlantic Beach, N. C. While making a steep turn at a low altitude the aircraft struck some power lines and crashed, injuring the pilot and his passenger and demolishing the aircraft.

Private pilot certificate of Kenneth C. Barnes, Bong, Wash.—low flying in the vicinity of Rochester, Wash., and operating an aircraft when it was not in an airworthy condition. While buzzing a field near Rochester the aircraft struck the top of a tree causing damage to the aircraft. Control of the aircraft was maintained, a landing made at Chehalis, Wash., and after inspecting the aircraft the pilot flew it to McMinnville, Ore.

Private pilot certificate of Henry L. Clark, Danville, Va.—low flying over a golf course in the vicinity of Greensboro, N. C., and failing to conform to the traffic pattern for the Greensboro-High Point Airport.

Private pilot certificate of Thomas E. Stanell, Asheboro, N. C.—operating an aircraft during the period when his certificate was in suspension as the result of a previous violation.

Civil Aviation Highlights

	1951	1950
Airports and airfields recorded with CAA, June 1.		
By type:		
Commercial	2,196	2,485
Municipal	2,281	2,223
CAA Intermediate	68	135
Military	327	333
All others	1,437	1,286
a. Private use	1,283	1,146
b. Miscellaneous government	154	140
Civil airports by class ¹		
Total	5,982	6,129
Class I and under	3,922	4,048
Class II	961	985
Class III	505	505
Class IV	376	373
Class V	136	137
Class VI and over	82	81
Total U. S. civil aircraft, June 1.	90,965	92,408
Scheduled air carrier aircraft, June 1.	1,217	1,164
Civil aircraft production, April		
Total	247	329
1- and 2-place models	50	106
3-, 4-, and 5-place models	181	216
Over 5-place models	16	7
Certificates approved, April		
Student pilots	3,010	3,318
Private pilots	1,472	1,794
Commercial pilots	475	420
Airline transport pilots	97	55
Mechanics (original certificates)	387	526
Ground instructors (original certificates)	47	94
Flight instructor ratings	107	153
Instrument ratings	194	99
Control tower operators	112	43
Traffic control activity, April		
Aircraft operations, CAA airport towers	1,414,045	1,372,935
Fly postings, CAA airway centers	1,130,952	921,222
Instrument approaches, CAA approach control towers	25,152	20,587
AIRPORT OPERATIONS		
Washington National, May		
Scheduled air carrier:		
Passengers departing	113,785	71,557
Passengers arriving	110,204	70,879
Aircraft arrivals and departures	12,673	10,178
Other aircraft arrivals and departures	4,354	2,836
San Francisco Municipal, April		
Scheduled air carrier:		
Passengers departing	56,309	41,507
Passengers arriving	57,274	43,301
Aircraft arrivals and departures	7,778	6,302
Other aircraft arrivals and departures	3,604	3,068
Oakland Municipal, April		
Scheduled air carrier:		
Passengers departing	9,302	4,703
Passengers arriving	9,138	4,289
Aircraft arrivals and departures	4,798	4,341
Other aircraft arrivals and departures	11,674	14,278
Miami International, April		
Scheduled air carrier:		
Passengers departing	87,469	8
Passengers arriving	69,860	8
Aircraft arrivals and departures	10,188	9,121
Other aircraft arrivals and departures	10,454	10,509
Los Angeles International, April		
Scheduled air carrier:		
Passengers departing	69,272	51,059
Passengers arriving	66,244	49,210
Aircraft arrivals and departures	8,914	8,155
Other aircraft arrivals and departures	5,705	5,344

¹ Airport type definitions: Commercial—Public use and public services, private control. Municipal—Public use and public services, public control. CAA Intermediate—No public services, CAA control. Military—No public services, military control. Other—(a) No public services, private control. (b) No public services, Federal Government control (Forest service, etc.)

² The following is a breakdown of paved airports and unpaved airfields:

Class of facility	Paved airports	Unpaved airfields	Total
Class I and under	113	3,809	3,922
Class II	174	787	961
Class III	339	166	505
Class IV	337	39	376
Class V	129	7	136
Class VI and over	80	2	82
Totals	1,172	4,310	5,982

³ Not available.

Problems of Local Service Airlines

"New and Challenging" Says Horne

"The local service airlines have a good grip on the job of providing air transportation to a wider segment of our population, but they have a set of problems that are new, different and challenging," Charles F. Horne, Administrator of Civil Aeronautics, declared in an address last month before the Local Service Airlines Forum at Purdue University.

The Administrator classed the principal problems as being in three categories—the aircraft, the navigation aids, and the airports. "In each of these areas, the CAA is concerned," he said, "and in each of them we have work under way."

Mr. Horne outlined the developments in the prototype aircraft field that were brought out by the necessity for replacing the obsolete DC-3.

"First, to review the situation as it has existed for some time," he said, "there were two aircraft developed by the industry which appear to have been designed with local service in mind. There were the Northrop Pioneer, three-engined high-wing, high performance plane carrying some 25 passengers, and the Chase C-122, a high-wing, two-engined plane carrying 25 and especially suitable for conversion to cargo. Both of these, however, have been taken over by the military and none of the production from either factory is available for purchase for civilian uses. While this situation will not exist forever, still it does rule out for now the application of these aircraft to local service needs. Furthermore, in my opinion, neither of these would have been satisfactory for local service passenger work."

Suitable Aircraft Necessary.—"Thus we are faced with the necessity for obtaining new aircraft suitable to the special requirements of the feeder service. These specifications are fairly well established and accepted throughout the industry. The Air Transport Association originated specifications for such a plane, and they have been approved by the Technical Subcommittee of the CAA's Prototype Aircraft Advisory Committee, composed of representatives of government and industry. The problem is, what steps must be taken to give the manufacturers a sound economic basis for going ahead with production of such aircraft."

"Congress recently authorized the appropriation of \$12,500,000 for testing of improved and advanced prototypes of transport planes, including local service types, and the job was assigned to the CAA. But no actual dollars have been appropriated to date. We have set up the advisory board I mentioned earlier, and that board has appointed a special technical committee. Six representatives of that committee now are in Europe where they are looking into the transport situation there, primarily to learn two things: what European developments there are which may be worth using over here, and what possible market there is over there for an improved transport plane exported from the U. S."

"An amendment has been offered to this prototype law which would permit the government not only to test, but to contract for the design and construction of a feeder line plane. This amendment proposes an \$8,000,000 appropriation, and names the CAA as the agency to supervise the contract."

Helicopter Service.—"The development of the passenger carrying helicopter—another activity which affects the local service airline—was discussed by the Administrator. He continued as follows:

"I said in a talk the other day that the local service aircraft problem is 'complicated' today by the rapid development of the large, passenger-carrying helicopter, and a helicopter enthusiast informed me that I had used the wrong word. It should be 'simplified,' he said. That indicates the confidence of the helicopter designers and manufacturers, who seem to feel that this new aircraft will soon be the answer to many short haul problems. Of course, the

most extensive and important helicopter operations and developments are being carried on by the military services.

"Recently the Postoffice Department asked the Air Coordinating Committee to look into helicopter transport of mail and passengers and advise it on the question of continuing such operations as those between the postoffices at Los Angeles and Chicago and the airports and nearby communities. This ACC committee now has made its report, not yet released publicly, but I can tell you that it expresses confidence in the future of helicopters for this service, and urges their further use. While the existing services are run over very short routes—right within a single community, in fact—we have already received applications from companies desiring to take part in prototype testing of the helicopter over routes several hundred miles long. In this connection, it is interesting to note that Los Angeles Airways is making considerable progress in instrument operation of helicopters.

The Administrator said that he believed that progress can be expected from these efforts and the amendment to the prototype bill could result in a transport helicopter as well as an aircraft in local service operations to replace the DC-3.

Airway Aids.—Mr. Horne discussed the air navigation aids as they applied to local service.

"New airway aids in the very high frequency band have direct application to the problems of the feeder airlines," he said. "You know, of course, that the CAA must study long and hard in establishing a priority list for the expenditure of the money appropriated for establishment, maintenance and operation of the airways. By the very nature of things, we must give higher priority to locations where traffic density is greater. But we must also provide aids for safe operation at subordinate points, in order that they may achieve their full potential."

"Let me say parenthetically here that the feeder lines have shown a wonderful record in the matter of safety during 1950. Fifteen feeder lines have been cited for outstanding safety records by the National Safety Council."

"We are in the midst of a program of evaluating the use of the new very high frequency omnidirectional range as a terminal instrument approach aid. At airports where 3,000 operations of scheduled airlines are performed each year, the use of such an aid, according to our priority conditions, is justified. In many cases, this involves merely the location of the range on or near the airport in such a position that the pilot can use it for let-down or even take-off procedures. So located, we call it a TVOR, or terminal VOR."

"These TVOR ranges are now in experimental operation, or just about ready for such operations at Washington, Indianapolis and Oklahoma City, where we are working with the pilots using those fields to evaluate and develop them. Our omnirange installation program is flexible enough so that we can vary the locations of many more if feeder operations require. So you may be seeing soon another structure on the smaller airports, our white plastic enclosure for the VOR antenna, looking like a large derby hat."

"With the omnirange installation, the feeder pilot has an approach and landing aid superior to the

four-course L/MF range. Since the terminal VOR can be located on the airport close enough to the ground so that it is not a hazard, the courses will be even better. The distance measuring equipment will add a very important aid. With the omni, the feeder line will be able to operate more reliably within the present instrument approach minimums. Experience and development should make possible still lower minimums, particularly with markers or DME."

Local Service Airports.—Airports are not built especially for local service operations, the Administrator pointed out, but the Class III airports are adaptable for that type service. In the 1951 National Airport Plan there are 636 sites listed that could be used for such operations.

"Today," he declared, "there are 200 airports into which local service lines operate, as against 56 in 1947, and there are 107 locations which have been certificated into which service has not yet been started. Then there are combinations—fields served both by local service lines and trunk lines, some 149 of these. Our goal is to see that adequate airports are provided for communities receiving local service, now, and in the future. In addition, our program of conversion of the airways to VHF is progressing at such a rate that better terminal aids can be ready, in most cases, as soon as airports and aircraft are ready."

The Administrator also discussed the priority assistance given in obtaining equipment and supplies under the present national emergency conditions. "In general," he said, "we have succeeded in getting civilian air transportation a good position in the lineup for materials and planes. Working with the Munitions Board and the CAB, we have been able to get all of the so-called scheduled air carriers, as well as the large irregular carriers, into a recognized program with practically the same priority assistance as is enjoyed by the military."

Spot Assistance Given.—"That assistance involves the acquisition of new aircraft which we handle in collaboration with the Civil Aeronautics Board; obtaining parts and supplies for maintenance, repair and operations; and special service which comes under the heading of spot assistance, and includes requests that do not fall within the existing program. These are taken up directly by the air carrier with the CAA in Washington."

"We have set up within the CAA the Office of Aviation Defense Requirements, headed by a man, fortunately, who had experience in just this kind of work during the war. It is a job that requires continuous attention. Even now, a change in procedure is planned which will take place sometime during the third quarter of this year, but later you will receive more detail on this than I can give you in the short time available now. I can assure you, however, that the final result will be virtually the same, and the priority the local service lines enjoy now as scheduled air carriers will be maintained."

Summarizing his remarks, the Administrator stated: "Thus CAA is working to assure the aircraft, airports and air navigation aids which are necessary for the growth of local service airlines into an even more important segment of the American Transportation system."

CAA Issues Flying Club Booklet

"The Flying Club," a CAA booklet on the organization and operation of flying clubs, is now available from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at 15 cents per copy.

The booklet contains chapters on how to organize a flying club, the cost of flying under the flying club plan, and practical hints on the operation of the club. Suggested club rules, by-laws and articles of incorporation are included in an appendix.

VOR
o the
s will
ment
i, the
liably
ums.
ssible
arkers

built
Ad-
rorts
1951
l that

s into
56 in
been
been
served
the 149
rports
service,
am of
ng at
ready,
ft are

riority
sup-
condi-
led in
position
working
have
ed air
, into
the same
try.

ce in-
h we
autics
nance,
which
, and
isting
the air

ice of
man,
kind
quires
a pro-
time
er you
a give
assure
ctually
lines
main-

strator
rcraft,
neces-
nto an
erican

et
organ-
available
nment
cents

ganize
g club
of the
cles of

RNAL